		. T			ă.		OBSERVERS:
							K.C. BALCOMB
			/		-1		T.T. Lewis
					1 ST DAY	010(ship) 0003 (cruise)	
	_			_	SMITHS	ONIAN INSTITUTION	
Shi	70					ISION OF BIRDS	
	rectio	n /	1		AT SI	EA DAILY LOG - E	
בעב	Tecoro	""	1		CDECTMEN		Date 7 OCTOBER, 1966
		1			SPECIMEN		Pg.# (
+	TIME	SPECIES	#	DTR		. REMARKS	
	1	DILOILE	1	T	· DILITID INC		
	1200	Brown booky	2			- Cost off lines	
	1234	pracy poppy	3	-		sitting on # 3 bouy, entrance to	
	1240					- last bouy at Pearl Harbor entrance	ce; watch commenceth
	1251	Birds	-	-		- very large flock of hinds	
			1			to starboard number impo	accompanying small vessel 3 mi
						flock has started	ossible to estimate
				1		course to their direction	sw; we have changed
	1258	RFB	1	E			4
	1315	RE Flock		-		- adult light phase	
	1213	1251		-		- mostly shear-not to	1-1-1
	1325		,			- mostly shear-pet, 50-10	obirds.
	1327	Wedge tail	/	-		- light Phase.	
		Pom Jacger	1	-		- Night	
	1330	Wadge tuil	2	-		- dight phase, -e,	
	1334	11	1 -	-		1 ign i have	
	1330		3	0		-light.	
	1330	Common modely?				- 2 light, 1 int.	
	1337	wedgetail	l l	@-		- sighting unreliable possibly jaeger	
	1337		1	E-		14.	- Slow Flapping dark bird.
	1337	11	1	F		- (+ . *	
	1352	ie .	1	@			
	1355	W	7	@-		_ 1+.	
	1400	14	2 -	SE		- too far to tell color phase	
	1404	11	!	Se -		-It. phase	
	1406	RFB	,	1V -		1. 16	
	1410	weder treil	2	w		Ad light, Phase	
		11	1	-		1 hight, 1 internaliato phace	
	1414	11	2	5-		- Tight Phase	
	1416	11	1	SE		11 11	
	1417	White Bumpal					
		Storm Pct.	1	SE		- very broad white rugs	
	1420	wedge-tuil	,		1	/	
	1421	11 11	/	SE		Tight phase	
	1421	CNT	1	SE.		- light phase	
	1424	Pom Taregon	1	NW		_ low to water	
	1425	wedge tuil	2	WE	-	- light ohome	
	1427	11. 7	3	SE		- 11 11	
	1431	11 6	1	SE -		- " " n	
			4	SE		_ way out	
	1435	11 71	1	IV		- light Pliese	, . / /.
	1436	0		1		- Pom Jeegan sat on what Some	bird as abar
	1442	wedge tail	1	SE	-	- light phase	
cr	1444	1º Ci	1	SE		11 11	
TH	1446	10 /1	6015	02		- To far to daterning Color Phase	
-	1446	Pom Juegen	1	N-		- Parts Phone	
	1450	wedge tailed	4	NW		Tight Please	SI-MNH-958-6
	4	0 (41.)	1			Tigus I and	Rev. 5-66

OBSERVERS: T.V. Lowis 1400-1600 B. A. Harrington 1600 - 1800 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 7 October SPECIMEN Pg.# 2 or DIR. BAND NO. REMARKS SPECIES TIME Pom Jueger 1456 2 fullowing Ship light phase a Tight Plione Turned by the above two Taggers 5 W-dge-Tuil 1459 CNT wedgetail -light pluse 1505 ghear-Pet SE 1508 wedge tuil Ight Phan SE 1516 NW 1512 W 1514 CNT NE low to H20 wedge. Tril light Phone closely SE 522 SE BFB Buddy Tunstone Ad - Red - foot Books 1 circles ship for ablect 10mm. Q 1531 Common Wood NE 3 . Laeger chosing one of the terms for or few Term 1 Ad H. M Pom win Loger Seemd Pom oine Joeger 1533 Fodult + 1 dynn setting on Az O 2 - in crea brednot together - one adult ly WiPhare on H2 0 1535 Pamarine Jugar I odalt + I ham flying together wedge-tuil light Phare SW FF 1547 Show-Pet 25:10 0 1602 Souty Tern Feeder, NU Shear-Pet 1603 (607 SE wedgetail light ph. 1610 Shear-Pet NW NW Wedgetail SE light ph 1615 5 hear Pet ned to be mostly Wedge tail 1621 WRSP 1627 Bird Not LEACH'S! No doubt about that Broad white sump. Wilson's-like flight 5F 1631 Wedgetail 34 light+ 42 Sooty/slender. NW 55 5SE Wedge tail light FF 1700 NW Terns or Jacques distant Shear pet 10 1704 Mewell's W 1705 Shear/pet New Wedletail Shan N weige tuil sheen 7/2 sitting On Ho - probably dark rump. V 1750 Pterodromarp SI-MNH-958-e Rev. 5-66

Ship Direction Ship Direction SPECIDEN TIME SPECIES # DIR. BAND NO. REMARKS 1808 Remain-face 2 100 received with secured at 182 3			1				OBSERVER P. G.	S:	1800 - Sanset
Ship Direction SPECIES # DIR. BAND NO. REMARKS 1809 Remain-form 3. St. Adult leguiphers But without elayabed such inform. Wahil secured at 1823									
AT SEA DAILY LOG - E SPECIMEN TIME SPECIES # DIR. BAND NO. REMARKS 1804 Pomerin form 2 5th, about leguipher but without elogolal del. Wahld remaind at 1823					_				
TIME SPECIES # DIR. BAND NO. REMARKS 1809 Romann James 2 Sollow Ship Wahled seemed at 1823 Wahled seemed at 1823		P					EN DATTY TOG - E		0
TIME SPECIES # DIR. BAND NO. REMARKS 1809 Romain James 2 Solling Bill related light place and settlered elogolar deal nections. Wakel remained at 1823	Di	rection				SPECIMEN		Date	7 October
1809 Pomanin Jage 2 50/100 Bill light place and arthort elogolal list webnice. Watch received at 1823		mT1 (F)	annatra	11		or			
Wakeh seemed at 1823		1				DAIND NO	o-el alust le sut Phase But without	elon	soled ded
			· omaris - junger		5 hijo		rectrices.	Ü	
							Watch seemed at 1823		
							,		
						*			
		,							
SI-MNH-958-6 Rev. 5-66	7								

OBSERVERS: Gould 0600 - 0800 BALCOMB 0800 -> SE -Ship AT SEA DAILY LOG - E Direction Date 08 October, 1966 SPECIMEN or begin observation at 0615 DIR. BAND NO. REMARKS TIME SPECIES Surrise small, appeared to be light gry booked and 0632 Pterodroma N all while below but too far out to be sure 0 Golden Plover 0644 flight swift & direct as if migrating. 0649 leasung flight, almost entirely gleding - light phase E Wedge- Fal Shewi. 11 11 11 11 11 11 0652 55 W Black-winged Petrel 0655 I m oot likely this species, but comed have been Borin boland. or appeared to be searthing light phase wedge-toil dhear 0700 NW White - rouged 0708 I broad white rung, looked different from most t'en seen on Storm petrol other crusis (PHS) 0715 Shear-pet E > dark; too for tor ident. 0730 Bird -> La. white, close to water; RFB or BFB 0741 Soot / gray boil NE Tern 0744 Tropicbird H20 0745 Red-tail Tropiched Blue E. wing 0749 5 8 Pferodrom u 0750 0750 2 生 5 0753 Cooks? Petul then block anderwing borden NNW 0758 weget in star light Phase NNE 0800 Olack-wing NNW 0803 Small Pherol. N 0806 Dank-rung? Z WILL 08 14 | Wedgetail Shear. N · light phase 0817 Small Pteroduma NE 6. Frigate 0824 2 occasionally sweeping and grabbing with bill for flying fish 0 on the wing. I didn't see her catch any Golden Ploug 0835 0 around from 10 min. Blackwing pet. 0905 0 Frigate Sp Blackwing pet 0916 0924 small pterodroma 0 424 SI-MNH-958-e 0924 Rev. 5-66

		sw T				*	OBSERVERS:
			/				0800 -> 1000 Balconb
							1000-1200 Lewis
					SMITH	SONIAN INSTITUTION	1200- Harrington
~ .						VISION OF BIRDS	
Shi	The state of the s				AT S	SEA DAILY LOG - E	
DI	rectio	on /	1		CODOTA	AT.	Date 8 oct, 1966
					SPECIME	IV	Pg.#
	TIME	SPECIES	#	DTR	Or BAND N	O. REMARKS	
-	0934		1		1	O. ILLIMATULD	
	0935	Black-wing pet Wedgetail		()			
	1	newells		NE		fiflying together direction mean	sincles they changed several time
	09 100 40		1				
	245	Dark rump?	1	NE		- broad dark margins on wing.	
	0954	Black-wing pet.	1 !	02			
	1003	ts.					
	1012	-6-	1	NE			
	1016	11	1	NNE			
	1029	11	1	5			
	1031	11	i	5			
	1038	ti.	1	NE	in the second		
	1040	Small Ptoradous	1	NE			
	1045	11 11	,	Q:		- way and	
	1647	Black wing Pet	1	NE		11 11	
	1050	P. Esterna	1	NE			
	1000	P. externa	1	NE		- Probably white need sing	Lusseard to have some
	1056	Black-wing Pet	1	NE		- Probably white neck since is induction of a down wing bonde	1 × a derk hearl -
	1104	Poxterna	1	N		,	
	1115	Bind	1	_			
	1125	sheer-Pet	1	SE		+	
	1129	Pexterna	1	N			
	1132	Muthland Petrol		SE			
	1147	wedge-tail	2	-			
	1156	white-tail					
		Tropic61-d	1	G		- adult over ship (at white p)	141-
	1207	Newell's Shearwater	1	Sω		- had more dock bordenderd canden in	7. 41. 11
	1215					ever seen - white packet est.	, pavein Hend ve
~ ~	-	Bird	-			horin.	well with they.
SF	1216	J.F. P.	6 _			horizon	0.
	1218	Newalls	1			all together. Searchin	ng flock
	1220	Mitted Petrel	1	SE			
	1224	P. hypuluca	1	E	+		
	1225	Pexterna	1				
		Jaun Fernandez	1	N			
	1	Black wing Po		_		5. Hins on H2 U	
	1228	Bird	1	5			
	1235	Mothlod Pot.	(6			
		Jum Fernandas	1	0			
		white-tailed	*				
	17-39	Tropic bind	1	0		- Inspected ship	
	1257	JFP	1	6			
	1302	RFB	,	~	M	SA	
							SI-MNH-958-
							Rev. 5-66

5W **OBSERVERS:** W -1400 Harrington Gould 1400-1600 SE DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 9 October 1966 SPECIMEN Pg.# 3 NE or SPECIES BAND NO. REMARKS TIME Peterodroma 1302 No 1309 P. externa (3) 1309 JFP together, one seen will JFP 13/5 - Mult in upper tuil coverts de Sheur-Pet 1324 Black Wing Pot 1326 Awade - Tuil 1331 light Phase 000 1332 Nwodge. tuil 1333 W (V Sooty Term 1355 9 Searching flock 20±5 Shear-Pet (9) JFP 1358 (5) 1407 JFP NE white - toil over ships still present at 1422 abelt 0 1413 Tropedad 1415 Red tailed on HZO Tripulad legal Phone N 1418 Juan Fermande, Petrol) - frood while remy White - sump 5 form Patie distant. 1423 Shear - Patul 426 Small Pterolina - flow SE probably wholewing - elight gur boch 2 420 - Ventral surface wort seen 1430 moffled ? Patrel w small Pteroden 1431 5W Slock-wing tol 1431 500 leght Phone 1434 Wedge-tail SE 1437 Small Pterahora adult over this looks gent like bud at 1415 1442 white-ful 0 Tropuland mall Ptoro chora 0 Thear In Patril leght Hore 1455 Walge-taled 563 SI-MNH-958-e Show at Rev. 5-66

OBSERVERS: Gould + Line 14-1600 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 8 October SPECIMEN Pg.# 4 DIR. BAND NO. REMARKS SPECIES TIME Large Pterodium 1508 NUW 1514 Luan Ferna-de Searching - chance of ging fish out never really 0 Petrul woo alle to attack some fish weren not an born long en ough. Did wel live although in a semila 1544 wadpertuil? silustion of we seen wedge toils pluge with the water Pfg. 6 Shearwater 1545 Sonin tolan could have been Black - winged but underwing had a Petul ? very heavy block backer - buil was fairly destret orty 1547 wedge-toil @ Fight Phone Shear ales Blue-faced Sub Adult (much black mothy) with bright orange 420 0006 3 leg streamer - streamer looked very long & new. Jaan Fernonly NE Petrel 1622 B. externa 0 1623 Stren Petrel 0 1630 1632 Storm petrel didn't fly like WRSP. NE 1636 Red-footed approached ship from southwest; then followed us. 3 booky P. externa 1703 0 1714 0 1714 6. Frigate NW - Imm. show/pet. Together 1721 Shear / pet 1736 Juan fernandez 0 petrel 1744 Wedgetail-0 14. phase FF 1757 0 } feeding can't tell color phase - too far. 12 +3 Sooty tern 1+. phase 1800 wedgetail NE 1806 WRSP 0 1808 boot in primaries Black-wing pet 1815 Juan Fernandez 1818 E SI-MNH-958-e petrel Rev. 5-66

		T			OBSERVERS:					
					SMITHS	ONIAN INSTITUTION ——				
Clad a					DIV	ISION OF BIRDS				
Shij Dij	p rection	n _			AT S SPECIMEN	EA DAILY LOG - E	Date & ocroser, 1966 Pg.# 5			
		·			or		18•π <u>5</u>			
	TIME	SPECIES	#	DIR.	BAND NO	REMARKS				
	1825	Shear pet Bind	1	00		-big, all dark.				
	1832	wedge tail	3	0_		-2 light, lint, sitting on H20				
	1839					Sunset cease deservations.				
						Sunset Clase Sullerourions.				
							,			
		r								
			287							
						•				
				•						
••							1.000			
,							SI MNILI OFO			
							SI-MNH-958-e Rev. 5-66			

5 W **OBSERVERS:** Harrington 0600-0800 Lewis 0800 -SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 9 0 dober 1866 SPECIMEN Pg.# or DIR. BAND NO. REMARKS SPECIES TIME begin observations 0630 0640 Black-w. Pet SUNRISE E 0654 0700 Bulever's P. E Wedgetail JFP 0702 -light phase 05 0703 SE 0707 P. externa N 0710 Black-W.P. 11 0710 JFP N Shear-Pet 0716 0723 Black-w. Pet. 5E 0723 SE 6725 Shear-Pet. 0730 Shear - Pet 5 0738 Shew Pet 0745 Bind 0747 Shear-Pot 0 6754 P. Externa 2 11 Shear- Pot \$755 Bladt way Pet 0755 0 JFP 5757 Nu P. hypoleuca? 280 5W 0804 Pexterna 0806 Shour- Pet 0810 0810 5w 0811 0917 5w light Phuse webge-Tail 0822 N 0026 @ 5826 White-newsed 0 0834 Black. wing Pet 1 NE 0842 5 0847 Shear-pet 6848 3.W Blocks. Wins Pot 6854 5904 JFP 3 Tight phone wedge-tuil 6907 100 Kedlike JFP Nutsune 0 0909 Paxterna-0 Shour Pet 0912 SE 0914 11 11 N Daris Phone - sitting on water woher-tail 0925 2 TFP 0928 a 0932 Shear-Pel N Bird 0933 Bluck. wing for 0 0936 11 11 0939 6 SI-MNH-958-e Rev. 5-66

OBSERVERS: -10:00 Lawis oould 1200-0400 1400-1600 Having ten DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 9 October SPECIMEN Pg.# 02 or BAND NO. REMARKS SPECIES TIME RTTB Following 5hip Ad 0957 0 1005 P. Externa 5 W - 1025 identified as JFP - had parallel course to ship 1005 Blacks- wing Pet SE 1020 Sooty tern traveling low to water 5 1022 wedgetail NE - It phase. 1025 WRSP 5 - not leache's (BAH) 1030 P. externa NE 1030 Pteroduoma 0 - JFP size Frigate sp 1045 0 1045 RTTB 3 -sitting on water 1045 P. externa SW wedgetail 1106 0 - 21t. Idark. Shear-pet 1122 2 5 1133 Sperm whale. ca 33' 1139 Shear-pet light underneath 1142 Fairy tern 0 possibly immature slight dankish areas. Bulwars Petrd 1210 SE Searching 1216 Wedge-toil Searthing - light phone Shearwaty SE 1245 birds 5+ 77 Feeding flock boulg visable en horeyon Shearwatercard gut made of shelloutter of x few but outlined occasiones against the sty or water. Petrol 1323 Nack-winged NW Petrel 1335 Duan Fern, Pet 1335 Shorebird - light patches on proximal portion of dorsal aspect of wing rest clark. 1336 Xinao 15. Shear Pterodioma. sm. B -together P. externa 5 Blackwing Petrel 1354 SE 1355 7 light phone, 2 clark phone, I intervaliate, 6 uncletermined Weelze-tail 16 140Z To an permandy adulto Suot Term 1422 Wedgetail intermediate SW several showed light underwings. 1442 Sooty/stender 5 SI-MNH-958-e Rev. 5-66

SW **OBSERVERS:** 1400-1600 Harrington SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 9 October SPECIMEN Pg.# or SPECIES DIR. BAND NO. REMARKS TIME 1450 Bm. Jaeger KIW. dark phase. 75±10% IF 1500 Sooty T. 125 : 50% Shear-Pot Frigate SP. chasing 1502 JFP SE heading towards FF sitting on H2O, 2 dark phase Wedgetaul 1505 JEP 0 1512 Sheav-Pet SF 1520 Souty Tem 7025 1530 Sooty T. Wedgetail dark 60=10 WNP 2 Bolwer's P. BLUX W. Pet 5 11 Pom. Jaeg 1532 Sooty S. SE 1532 JFP 1534 0 ShearPot 1535 JFF 1536 Wedge-tuil SE 547 JFP. 8 1547 Shear-Pet 00 1550 Shear-Pet probably sooty/alender 5 1555 · ship enters rainguall 1605 JFP 1606 NE 1608 8 608 Wedgetail - light phase SW 1615 JFP THAT object Squall no much Princips # 6057 no white seem on underwing. 1645 6 Souty/Slower 1120 23 SE Bulwer's P. 1722 907 Souty /5/6. 1735 white on under ung SE Spotted Sundpyon 1758 Landed at on ship - collected 0 1805 Black-wing pet. S 1810 6 Pterodroma 1836 4 BWP size - 3 JFP size 0 1840 Souty ten -ad, Shem-pet SI-MNH-958-e 1843 2.5 -tight group. maybe 5/516 but no arcing 5 5 Rev. 5-66 1843 end diurnal obs. 1857

OBSERVERS: 1800-55 Bakonson 1 STNIGHT IN BURTHERN GRID pt 000 2100-0000 0001-0300 Harrington SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date \$9 007, 1966 NOCTURNAL Pg.# 4 10 oct 11966 DIR. BAND NO. REMARKS SPECIES TIME Sunset-begin nocturnal observations. 857 Sooty tern 12=3 1900 Shear - pet -light too poor to determine species. 50 5 ×2 1=55 - heavy rain rain stopped 2305 - turned on starboard cargo light 2310 pore white below didnot call, tropicbird size, probably tropicbird Bird 2312 - rain - there has been a lot of lightwing 2315 on horizon for the last hour. 2327 Shearvatar-- flying Around light in rain Petrel altwhite ventral surface darkphese - slew into ship -coptured - es Mechal 2330 wedge toil skearwater 2530 still raining bud 2335 innain Flying around in light, enclosing of ten high own 2335 Juan Famont 5 hip - still present at 2345 roin stopped 2357 Juan Forward - & ging about legh 5 Pelie) Juan Fermy fying about in light - one the flew Petral · down to water + landed - possibly feeding . Bler-w. let. 0015 landing on yardarm next to light, aiding high (above masts) around ship. Believed to be all black-wing, pet. Pherodrama 0035 mottled Petrel 0103 ship more passed through rain squall: BWP droped out. 0125 SOOTY 1. 0135 BWP 0145 Souty T, 0155 SI-MNH-958-e Rev. 5-66

500			ERVERS:
Ship Direction TIME SPECIES		SMITHSONIAN INSTITUTION DIVISION OF BIRDS AT SEA DAILY LOG - E SPECIMEN NOCTURNAL or BAND NO. REMARKS	Date 9-10 Oct. Pg.# 2
0240 Bird 0425 B77B 0434 Tevn 0510 G. Ploner 0515 Bird 0540 11	1, 1, 1	white andermently	observations ceasely
		Sunne - Noctural	observations ceasely
			SI-MNH-958-e Rev. 5-66

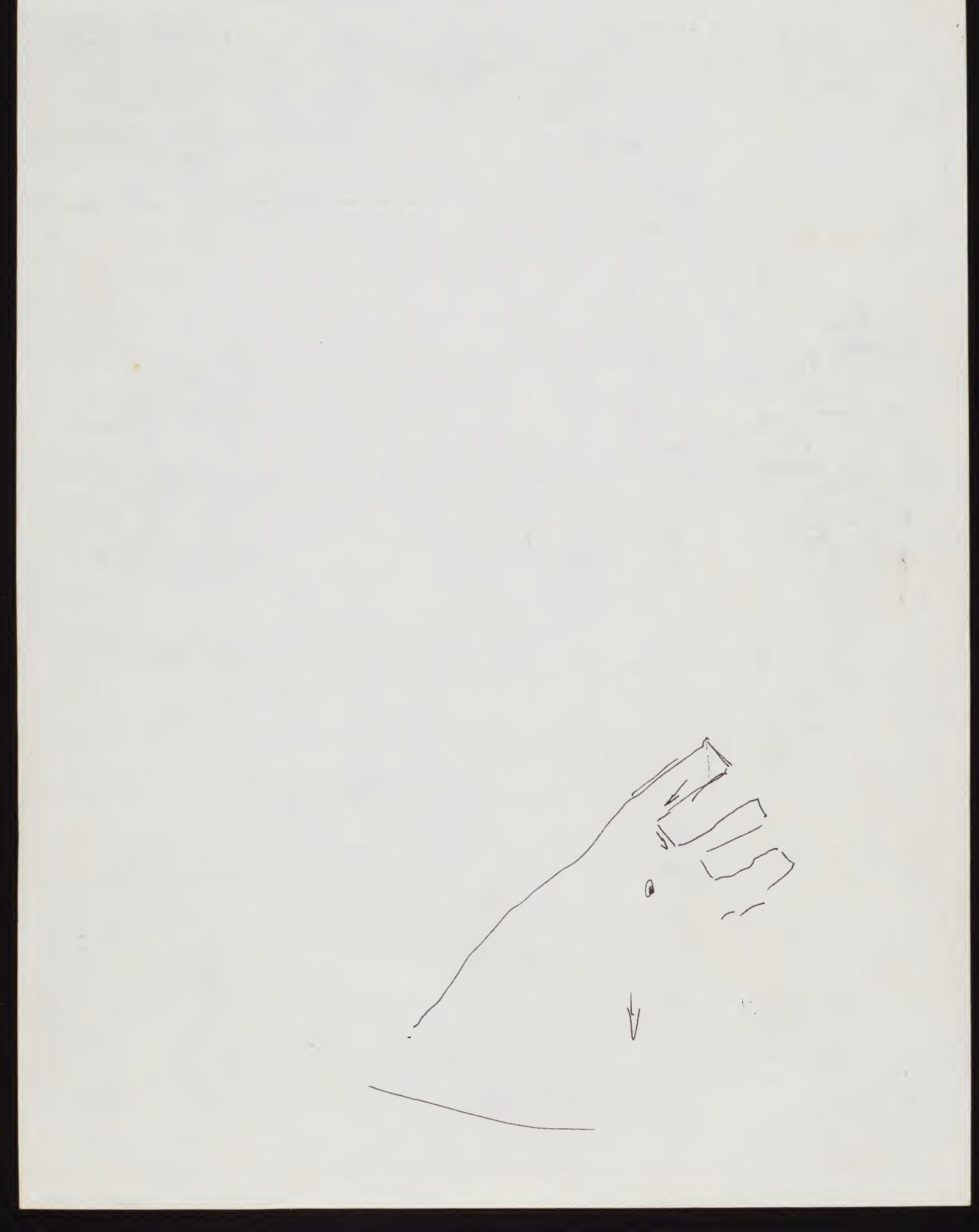
OBSERVERS: 0600 -> 0800 Balcomb Goold 0800- 1000 Harrington 1000-1200 SMITHSONIAN INSTITUTION 1280-1400 Lawis DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 10 00, 1966 SPECIMEN Pg.# 1 or DIR. BAND NO. REMARKS TIME SPECIES 77 0654 Sumise - begin Dumal obo. 0659 JFP 0 0722 RTTB immature. 0 0725 JEP 0 0725 White-neck-pot 0853 released 0753 Show-pet dark whoe weeks toil 0803 11 SW Cought last vight 0920 wells - tail ? NE Thear alin soul# 645-06301 0958 Sooty/slender 5 well enough to note light bloods age taken Black-w. Pet 1004 underwing! Seen flying through 000 a heavy rainsquall. Petrel. 1010 in vain squall. 00 JFP 1011 leither WRSPOR Bulwers 000 1012 Sooty/s/ender 15\$5 5 1020 BWP 000 1025 Phoenix I/ Tahititian N 1025 shear/pet N 1040 P. externa 1042 R 1054 P. hypoleuca 1100 JEP IV 1102 P. externa 1107 Bulwers de webgetail 1110 - sitting on HzO. Coll (BAH) COO 1820 JFP JFP 1125 100 4150 Souty/Slender white underwings noted. 5-1205 18 No white under my / Yated Pary Jugar 3 Blads-wing 1212 5 W 1216 wedertil Darls Phon 5W 1223 FuryTern Shew Pet 1224 1 Some white under uny 5w Sout/ Slender 1226 Parts Phase SW wedge-tuil 233 1247 Mottled Pet. NE SI-MNH-958-e Rev. 5-66

Ship Direct:	ion E	1	_ ~ ,	DIV	ONIAN INSTITUTION ISION OF BIRDS EA DAILY LOG - E	Date 100ct Pg.# 2
TIME	SPECIES	#	DIR.		. REMARKS	
125	O BFB	1	SW		- Red-Jost Books	
130	7 Mothled Pet	1	0		U U	
13/7	11 11	1	8w		- No white vis under wmg	
,	Souty /5/6.	4	SW			
132	Souty /S/6. 7 Phoenix/Tuhat	in 1	sw		- W. 2/	
132	1 wedge-tail	,	12		- par15/Phase	
1386			IVE		Daris Phre	
1420		1	NE			
1510	P. externa	Z	0		- sitting on water - them s	w.
1525	Juan Fern. Pet				5	
153			6 . 5 ∈		- 5 misses by	
155	7 P. externa		-			
	2 Sm. Plerodura	1	9 5			
163			SW			
	5 6. P. hypoleuca	1	Ju			
163	5 Sm. Pterochum	1				
163						
	Storm Patrel	1			1 7 .//	
11					Change course to va	
170		1	5	-		
170		1		+		
1700	1	The	5		4.4	
1710	BWP	1	5-		possibly a juage	7.
1720		1	SE S			
172	9 Black-wing.	1	5			
	Petrel					
1745	White-rungo Storm Petrel	1 -	0			
174	4 Sm. Plerodram	1	NU		+	
174		1	84			
175	9 P. hypolenca	1	0			
175	9 B. Kypolura	1	NE			
1810	. //.		5			
1815	4	#1	5			
181	3 "	t	5			SI-MNH-958-e Rev. 5-66

		NW					OBSERVERS: 1800-2100	Harring ton
Ship	ection			SMITHSONIAN INSTITUTION DIVISION OF BIRDS AT SEA DAILY LOG - E				
			91		SPECIMEN		Pg.#	10 Oct. 166
	TIME	SPECIES	#	DIR.	BAND NO	REMARKS		
	1922	wrsp Small Pterodroma		S				
	1847	Phoenix/ Tahitian Petrel	,	W				
	1952	Long-T. Jaege	- 1	5 Cu	D			
	1906 -					SUNSET		
						,		
	,			,				
							1	SI-MNH-958-e Rev. 5-66

OBSERVERS: 1900-2100 21011-2400 2400-0300 SMITHSONIAN INSTITUTION 0300-0660 God 0600-07/5 Lewis DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 10-10ct. WOCTURNAL Pg.# / or DIR. BAND NO. REMARKS SPECIES TIME 1906 -SUNSET climas come to IVE white undersides 5 mall 2136 - 30 Sher/Pet 23101110 0030 Bird - BWP 3 0700 Souty/5/6 heard one, I thought so about twenty SE minutes earlier, tov-but less certain then. - No who to in under un, Jana con 26023 1 am SI-MNH-958-e Rev. 5-66

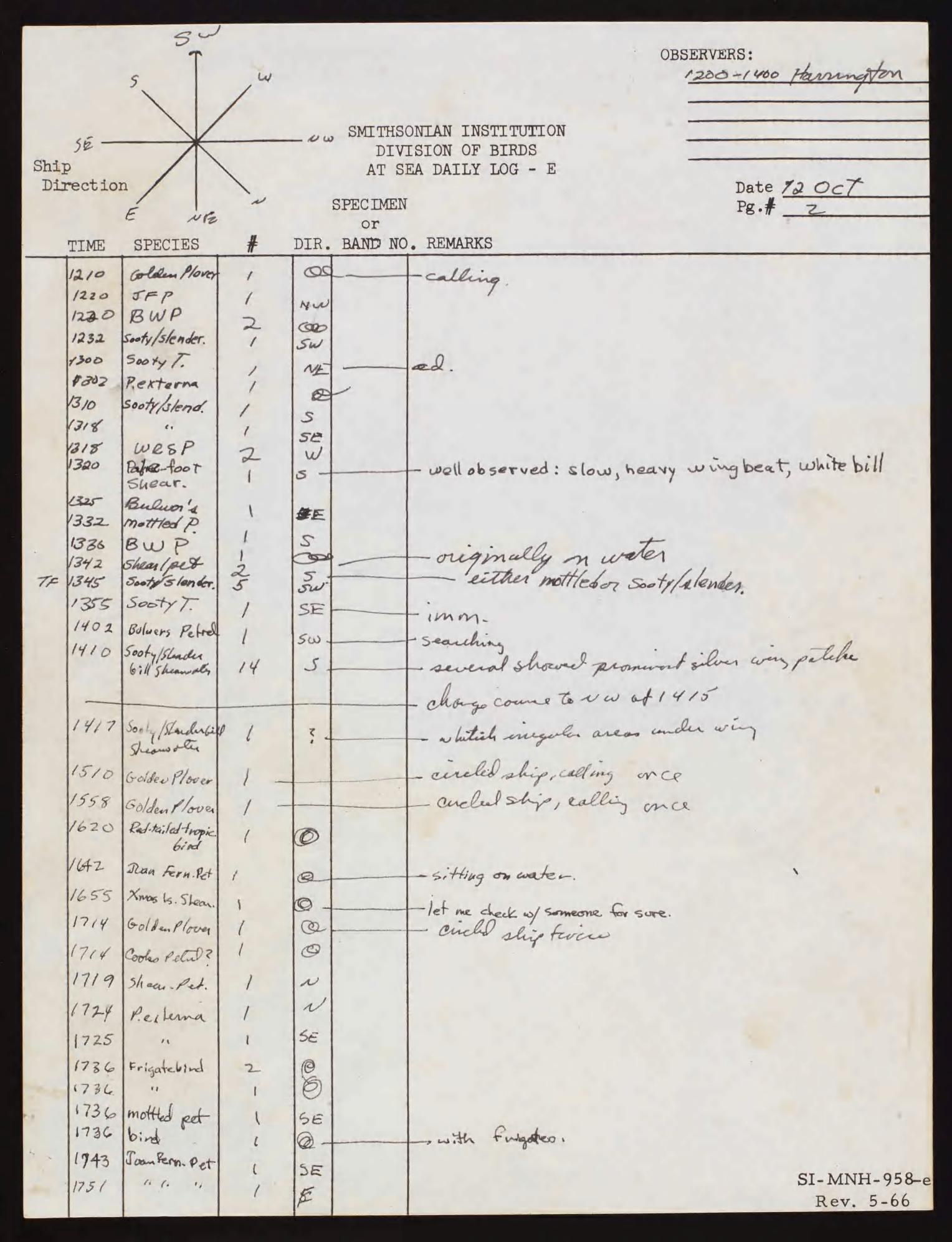
OBSERVERS: 0715 0800 Lewis SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Pg.# 11 October SPECIMEN or DIR. BAND NO. REMARKS SPECIES TIME 07/5 Surize 0721 BITB 0 our ship 0730 BWP SW 0744 Souty/5/16 No white in underwing 0810 Jacquisp 5. 0836 RTTB - Pomarine or parasitic Sooty/slend. 301055 0840 TF 5 0900 RTB coll (BAH) Flying over ship 0130 Sooty T. - adult, ME 0940 Wedgetail - all had dark underwing -good light, Ne 0946 Sooty/s/End. SE 0950 mottled P. 1005 Red-toil 0 Fregerbal 107 Red-foil Typic Ord - collected Ken Balcomb - purkinh plan age on 420 Sorty on Slander bill Shear no arching, low towater probably alender - billed - underway after picking up sid 5 1/20 1154 Black-wing W Pertel Sooty-Stander-6:115 hunwales 12.12 6 Tropic bird ? 1246 RTTB 0 1303 Tropic bird 0 1303 mottled-pet. 5W 1312 1315 0 1328 Souty /5)6:11 5W dark undervenego. beautiful dark bud. Shear 1338 mottled petrel 1340 Sooty/51bin 1351 mottled pet 1355 Book Slbul SE light underways 1410 1, shen SE REB 54 Souty/8/6 SI-MNH-958-e 1346 Rev. 5-66 55

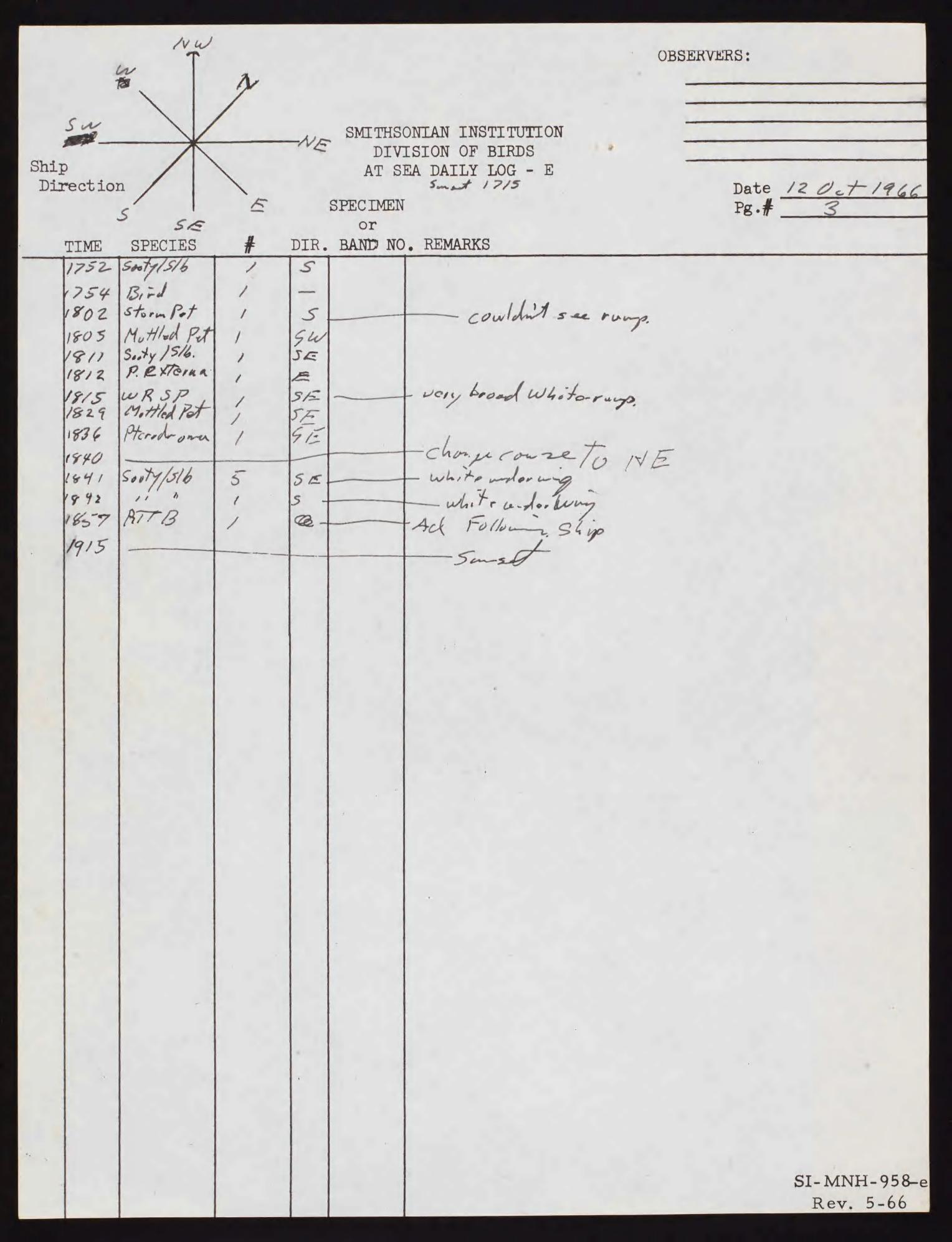


	IVE		OBSERVERS:					
Ship Direction				THSONIAN INSTITUTION DIVISION OF BIRDS T SEA DAILY LOG - E MEN	Date 11 Oct. Pg.# 2			
TIME	SPECIES	#	DIR. BAND	NO. REMARKS				
1600 1615 1627 1645 1647 1647 1704 1705	Mothed Pot mottled Black-w. Petrel Black Pet. Shear pet. Shear pet. Shear pet. Shear pet. Perodroma ETTB Black wing Petrel Prevochora	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 5 5 5	adult. - collected by B. Harri - change co	gton wase to NW			
1730	RFB Pterudroma AP.	1	SE	Ad light Phone - I dark underwar	Her picking up down ed beid But forthoods ig. P. externa - size. wast Pterodroma. like			
	Mittled Pet Bup Evelgetail Sm. Pterod- roma Bulwerle	1212	SW Caa N		ve K			
1.4	Sooty Stender 6:11	1	SE SE	5	il .			
1824	JUAN Fernanda Petrol Black-wing? P. Lorel	1	0					
1833	white rempo Storm Petrel	1	0					
1841	Black-wing Petrel Sooty/51.6:112 Sheavualer	1	UE 5					
1945		1	5					
185 Y	Sooty Showwa	4/	5 W	silver wing f	lasher obvices SI-MNH-958-e Rev. 5-66			

OBSERVERS: could 1800-2100 Ship AT SEA DAILY LOG - E Direction Date 11 October 1966 SPECIMEN Pg.# 3 or 1906 Sonset DIR. BAND NO. REMARKS SPECIES TIME - 500/4/5/ender 6:11 or mottled Pehrel by flight. Shear-Pat 1917 Lots of feed in the water squid ovem. Fish 0 2200 > 2207 2015 RTTB 2 0 · sitting on water 7235 Pterodroma Small light underneath 2240 2040 myrado of broluminescent jellies and some squidare around and have been since 2200 2317 Bird 2335 coo23 Tern? 6 5113 Bird Low to H2 10 white under noth SE 6/45 Light on Bird 0400 Black-W pet, Bird 0430 seen by watch flying over radar Bird 0545 mast SI-MNH-958-e Rev. 5-66

5w **OBSERVERS:** Gould 0600-0800 SE NW DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Date 12 October 6 Direction SPECIMEN Pg.#_ 4, or BAND NO. REMARKS SPECIES TIME apparent sun rise Ca. 0718 0735 Pt. externa 0756 Black-wing? Petrel souldhove been cooks 0 0804 Pt. externa S 0815 Juan Fern. Pet 5 0824 Sooty/SIbill Shan very prominent white underwing 5 0829 -white underwing. 5 Black-wing Pet 0837 Oz. 0850 Juan Fern. Pet SW 0850 0 0910 Thear-pet 2 9 white underneath 0916 50014/S1bill 5W white underwings 0919 0921 SW Z 0937 5w 0947 11 Sau Blads-wm 1003 Œ, 1008 P. Exkma 5 1017 5.74/5/6/1 5W 1017 shear/Pot 18 Bluners Pet 1019 SSR, wedge-tuil Duris, Phose Sorty/516. SW 1023 Nowhot + in under unny SW Goldon Plows Q Circlinis Ships 25±5 Suity/5/15 SW white nucler north Shear/Pot NW Blacks - Wing R. Black - Wing P N Sooty/5/5 white is wderways Sw 1057 SW Hoteled The cinclin 9hij Golden Ploves 1057 0 Probably same as 10 10 @ Totaly 5 Binds 1125 SortyTern 000 50-1/15/6 SW. 14. white underway Tueger Sp. 5, thing on H20 BWP No white in woderways Souty/9/h 1152 SW 155 1, h 5 W 1156 64 SI-MNH-958-e Rev. 5-66

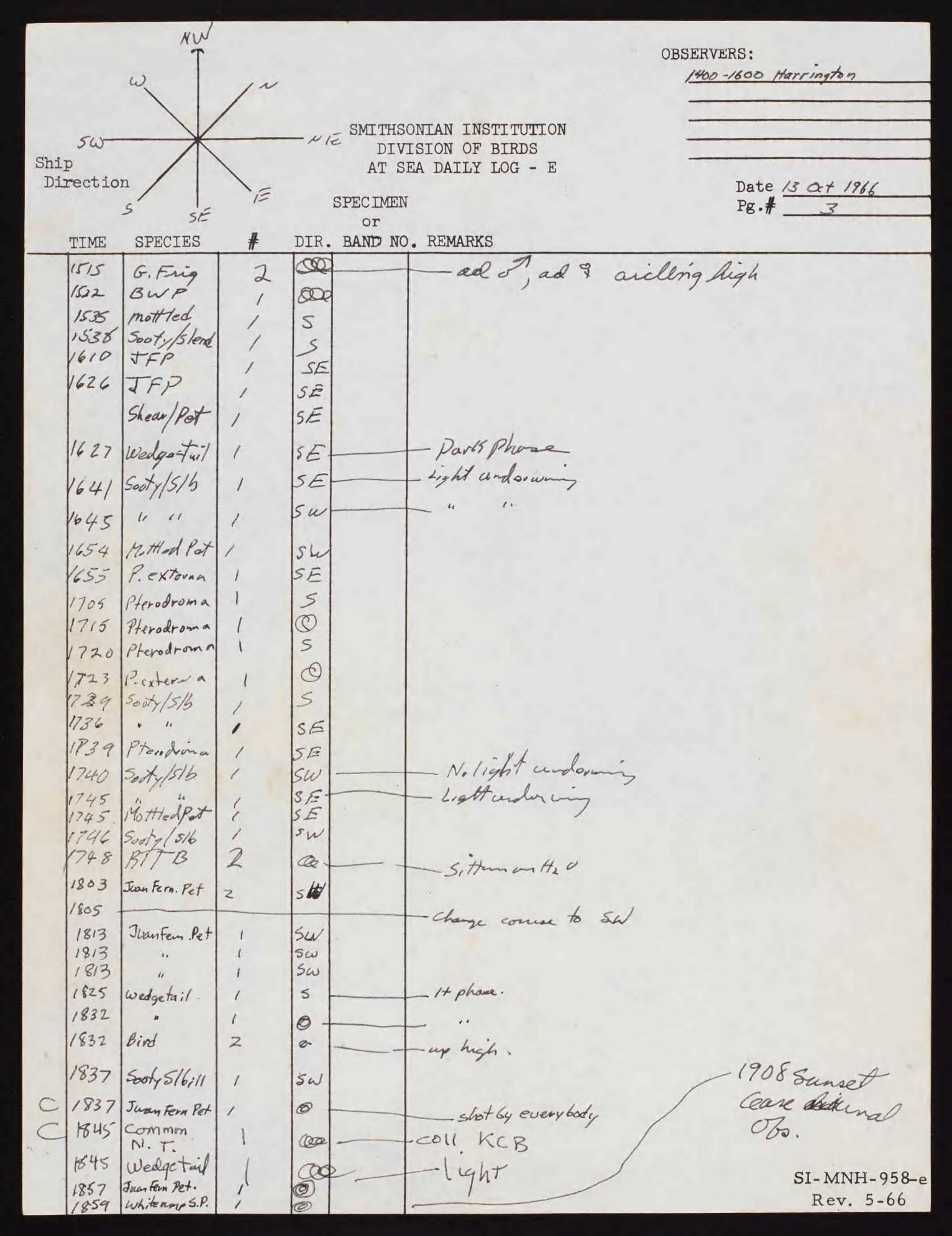




Ship Direction			SMITHS DIV	ONIAN INSTITUTION ISION OF BIRDS EA DAILY LOG - E	SERVERS: 18-2100 JJL 2100 2400 BAH 0000-0300 PG 0300-0600 KB 0600-sunrise BAH Pg.# Pg.#
TIME SPECIES	#	DIR.	BAND NO	. REMARKS	
1915				- Surget	
2140 Sooty Term	-			- heard cell	
2205 Golden P	3			- believed to have been - not golden P ad.	with in the contor
2206 shouling.	1 -			- second to have veen	secure on the west.
2232 Sooty T.	1			-al golden r.	
2305 Bird	1				
2325 Shear-pet	1			- small asor smaller	Than Black-W. Pet.
					13 october
0150 Sooty Tern	1			1 0 -01.	0000-0300 Gould
3045 Bird	, –			- heard calling (twice) in distor	nce 0000-0300 Govld
OSA Z	1	5		-flying at ca 40'	
		SW			
0650 sooty/slend	1	SE		* *	
0952 Sooty/stend	1	SE			
0659 11	1	1.			
07/5-				Survise	
				ST = 2	
				. B-0 = 2	
				GP=3	
	ar.			glace = 1	
				5-8=1	
				3-4-	
				•	
		1.			*
			-		*
					SI-MNH-958-e
					Rev. 5-66

MES 5unies -0800 **OBSERVERS:** Harrington 0800-1000 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 13 Oct. 1966. SPECIMEN Pg.# / or # DIR. BAND NO. REMARKS SPECIES TIME 0715 SUNRISE organ Kesterna 0120 Restema 5 0724 Sooty/studer SE 0740 SE 0741 Shear/pet 20 landed on the D RITB 0745 0802 Souty/5/6. SE 0803 Bird 0807 988 P. externa 0814 3 Fellowing Ship 0817 0827 JFP NE - circling ships Golden Plans 0930 a 0848 P. externa Q 0910 White necked NE 0914 BWP RE Muttled Pot 5 W E 0924 P. externa No white in under u SE 0934 wedge-tuil - light pluce E 0938 NE Jegger Nowlike in under uns 0953 S.ity/5/b. SW Bird 0956 Nowhitpin underwany SW 500ty/5/6 5W 1004 1006 mottled petrel 0 1010 2 1035 wedgetail 0 Hiphase. P. phaeopygia 1043 SW 1057 wedgetail. NE 1057 Shear-pet 8 1057 0 1057 1115 500ty (5/41) 1119 Look underery mottledpet 1129 9W =/ Sw 1130 1130 Sorty/5/6;11 0 SI-MNH-958-e 1134 P. Phaeopygia E Rev. 5-66

OBSERVERS: Govld 1200-1400 1400-16 Harring BIRDS Ship AT SEA DAILY LOG - E Direction Date 13 oct SPECIMEN Pg.# 2 W 5W or BAND NO. REMARKS SPECIES TIME mottled petrel 1437 SE 1137 Shear-pet NE 1145 Pale footed she SE 1147 wedgetail It phase. N 1155 Stoven pet E 1210 Cook's ? Petrel SE 1213 Frightebird feeding then flew 5 = watched for so 5 min. 0 1217 mottled Petrol 5 1235 Shear-Pet - Possebly light place Weeke-tail NE 1245 Great 0 Frigatebird 1253 Wedge-tail light phone N Shearwater 1300 JUNN Ferwands 0 white-weck Petre Common wordship 0 Ten 1303 Juan Fernandy 0 Petro fraulling 1304 mottle O Petral 5 - traveling - their came book gory w 1321 Golden Plover SE what were peopled the some Turd come bord at 1327 1348 Kernodec 0 Petro - satin water - light phone Black-wing 1352 W Petrel Sooly/stender 6:11 white - weck 1353 NB Petrel G. Frig. 1358 020 1405 mottled P. Black-W 1410 change course to NIW Qe 1422 Sooty/sland. 1438 14 Golden P. CBAH EKB cas P. Gaterna SI-MNH-958-e 1431 Shear Pet 5 Rev. 5-66



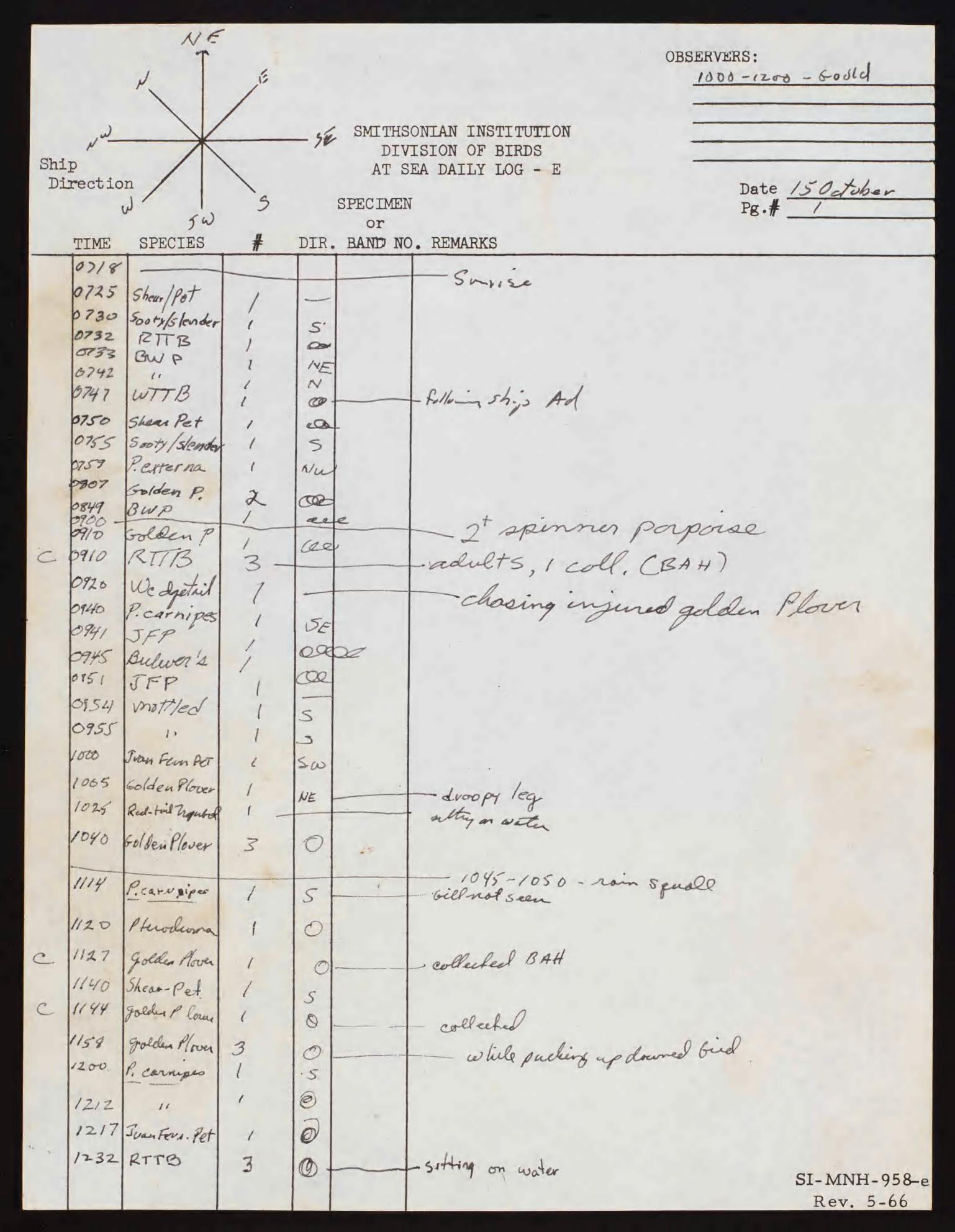
		SW T				OBSERVERS:	
		\rightarrow				NIAN INSTITUTION SION OF BIRDS	
Shi Di	p rectio	n /			AT SE	A DATLY LOG - F	/19 5 det, 1966
	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS	
	1908					Souset-commence nochrad watch.	
	1915	Golden Placer Juan Fern let	1	3		- calling	
	September 1		/	0			
-	2040	Tropkbird.		5		sitting on water	1 1 2
						probably shear/pot-Low to HzD, flashed under heath	(white
	0724					- Sumise case noctunal of	☑.
•						1102 - 2005, 1	
						19.123 - SHOP X	
						0.000	
						7 11 2 2 2 2	
						64/05	
						E 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
		-					
e e:							
							SI-MNH-958–€
							Rev. 5-66

SW **OBSERVERS:** 0600 - 0900 BANGONB 0800->1000 Gould 1000-Harrington DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 14 OCTOBER, 66 SPECIMEN Pg.# __ or DIR. BAND NO. REMARKS SPECIES TIME Sunrise - commence divinal worth 0724 0730 Common Moddy 0 tern Sus 0735 Juan Fen Pet 500 0735 0737 SW 11 0745 ** 0 0746 SW 11 0753 11 0 joined bird of 0746 1180 SW 0845 NE - sitting on water coll. KiB & BAH 0858 Red tailed T.B. 0 0859 6 Frigate 0 FF Trus 50 Shear pet 75 molfled pet 0859 headed 5 2 0 0920 Jacon Fern Pet NE 0920 Pexterna 5W 1020 Black-wing 0 Petrel to skirt ship. Probably derection aftered 300ty/slender 1038 F. 1120 SE 1132 Fairy Tern NE 1157 P. hypolica Method Pet 1202 Bulwars Pot 1202 3 1204 Sorty/516 1 ight when my 5w 1206 WITB Q. fullway Ship Ad 1216 JFP SW 1217 BWP. 5W change come to ENW 1245 BWP 1257 SW Sooty (5/5 1301 5 W 08 TFP 1306 SE Sosty /516 1325 1342 F. externa æ 1410 Bolwers Pet SI-MNH-958-e 0 Rev. 5-66

ww **OBSERVERS:** BALCOMIT 1400 -> 1600 1600-Gould 1800- 1935 Harrington SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 14 OCTOBER 1966 SPECIMEN Pg.# 2 or DIR. BAND NO. REMARKS SPECIES TIME mottled petrel 1452 5W 1502 Sooty / SIbill 500 1510 SW 1514 SW mottled petrel 1517 SW 1518 11 5W 1524 Sooty/Slbill SW 1531 Blackwing-Pet. - big fish Jumped 100 yds from ship. N 1544 Juntern Ret 0 -coll T.J. Lewis. 1544 Black wing pot 0 1557 flock sighted 1615 -drifting near flock waiting to potskiff over. Pink footed 1620 headed towards flore - light bely fut Shearwater mottled on flanks & cides, white under is well inegeler da k border, Carl above, lage 1620 mattedotal 5 Pale vill - molting en douval scurface 5 1640 Blad-wing 0 Potrul 1655 P. externa golden Plover 1651 1700 actively feeding, large predatory fish Flock 155\$ 5 beneath flock Sooty ? Tern 150±w Alent 19 10 t2 GFrightetind Shear-Pet Golden plover mottled petrel SW 1726 Sasty/5/6/11 light underwings mottled petrel Black-wing pet - sitting or water - then NW 1737 Golden Plum Bu p mottled 1745 SI-MNH-958-e Pterodroma Rev. 5-66

ME **OBSERVERS:** sould 1600-> DIVISION OF BIRDS Ship AT SEA DAILY LOG - E OURNAL Direction Date 14 Oct 66 SPECIMEN Pg.# 3 50 or DIR. BAND NO. REMARKS SPECIES TIME 1755 P. externa 5 1757 mottled Petrel 5 1802 Shear-Pet. 5 1803 P. externa 5 1807 Coak's Petrel? like Blackwing except un wwwing border, vot N as dark or as winds or as sharply defined - friely close P. F. 1814 mottled P. 5 1814 black axilary 5 1830 WITB 1831 WRSP - Flying over; Adult 600 Ptorodroma 1840 Cea 1845 Bulwers 1845 WRSP NE P. externa G, Fug 2 1846 mottled 5 Pet. 1850 G. Frig as 1552 Pterodroma. 1852 Mottled P. 1915_ - close observations SI-MNH-958-e Rev. 5-66

NE **OBSERVERS:** 1915 - 2100 Harrington 0718 Summer SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 14-15 oct. NOCTURNAL SPECIMEN Pg.# / or DIR. BAND NO. REMARKS SPECIES TIME 1915 --SUNSET: BEGIN OBSERVATION 1917 2040 Sooty T. -Think I heard one adult 2145. Shedr/Pet Cargo light sust Toursdon 2200 11 2313 Shear/Prt Light under neith - Lightrain squall 0135->0150 0715 Smill Pterophera / Surise 0718 1917 - 2017 = 0 . 2017 - 2117 = 1 21.17 - 2217 2217 -2317 -0517 23/7 0117 0017 0217 0117 03/7 02/7 0417 0317 05/7 0417 0617 0517 07/7 0617+ SI-MNH-958-e Rev. 5-66

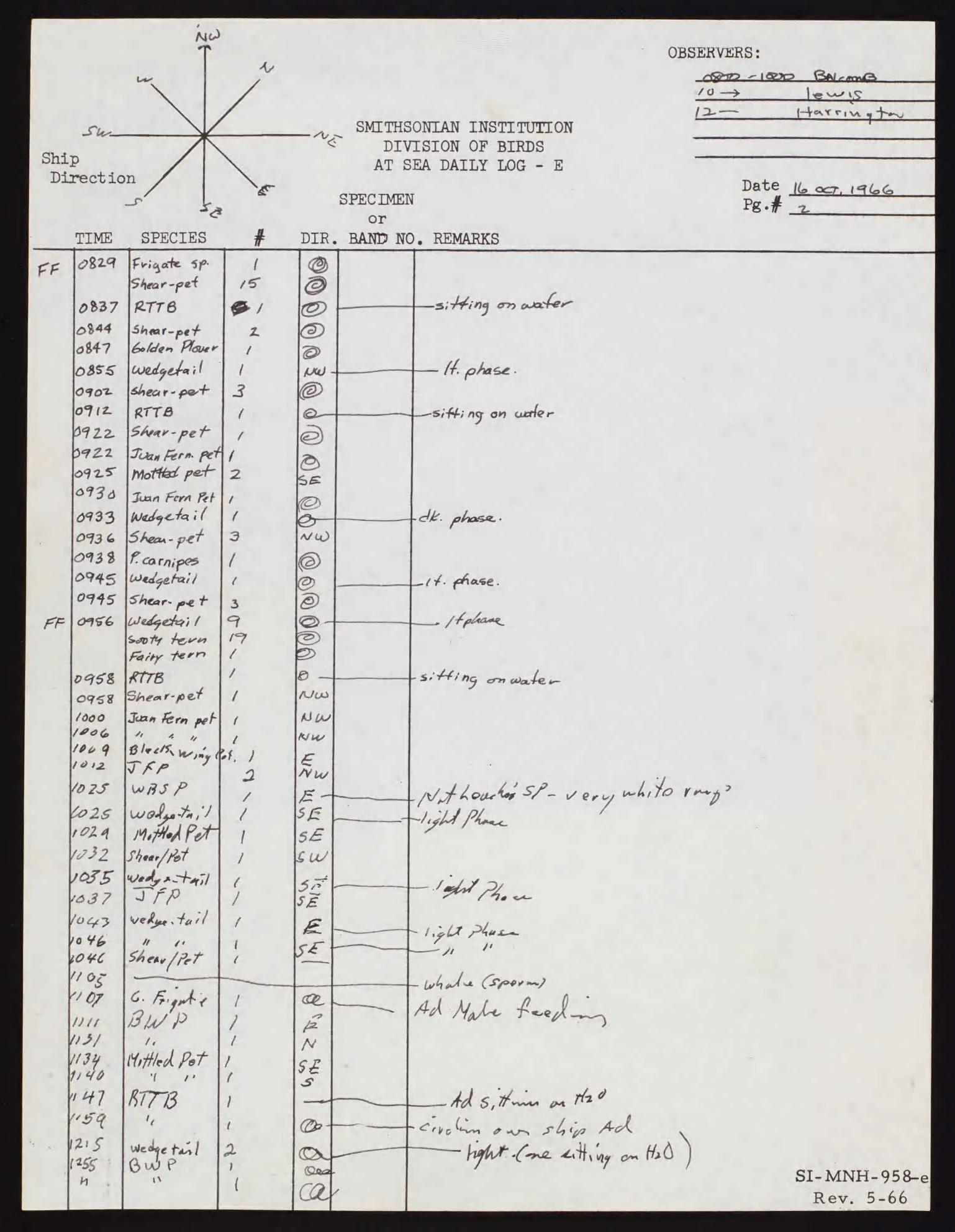


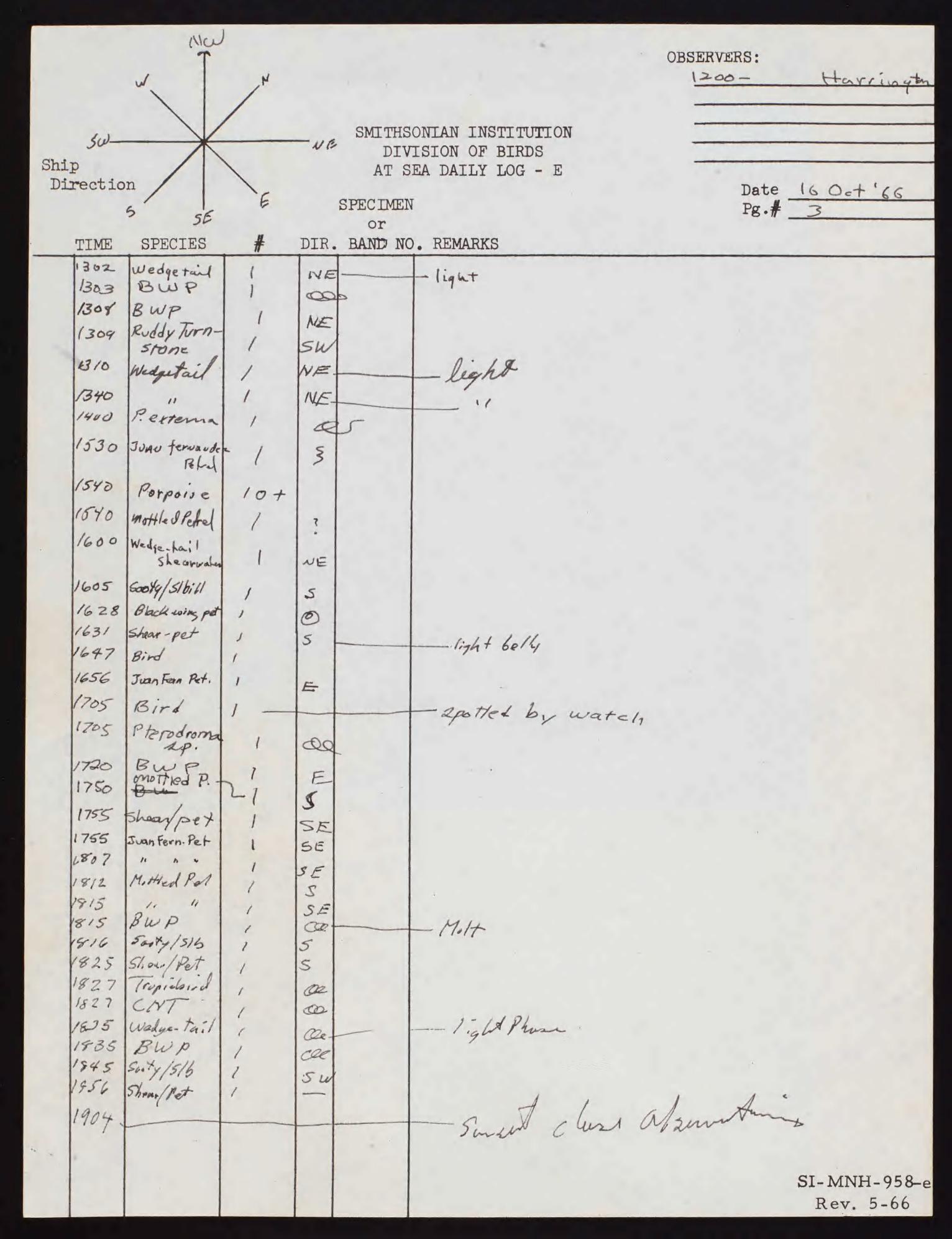
NE **OBSERVERS:** 12-14 BALCOMP Harrington SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date ISOCT, MGG SPECIMEN Pg.# 2 or SPECIES DIR. BAND NO. REMARKS TIME 1245 Golden Player 0 coll KCB 1256 11 0 1256 RITB 0 Bulwers pet 1300 0 1300 Golden Plover 0 1302 P. carnipes 1310 Dark-rump pel? 1315 Juan Fern Pet 0 1355 Golden Plouser 0 1400 Sooty Torn Pairy Tern Groy. Lacked May be parasition

- 14 th Phone

Finanture
Ad Mile reager? Pake tocted Shoumater walgetail JFP 10 Burgard Book 6. Frighte æ 6 ddon flower - Circling Ship 0 sitting on Had Pale- footed 1307 Shearnster 5 W 1508 Shear/Ret Su 1525 JFP 1533 SE 1348 1554 11 SE 1558 1. ght ando Souty/5/6 1559 SE. 1606 BWP 000 Sootylaldyb 1606 5 Pextern 1607 CR coll (O'Brien) 1615 Cold, Ploves 0 5/slender 1623 SE light. 1626 Wedgetail 5/4 lenders. SE 1630 1632 JFP 000 light wedgetail JFB 1645 E-1655 000 SI-MNH-958-e S/s/enderl. 1655 5 Rev. 5-66

OBSERVERS: 06-0800 Goold 5W-Ship AT SEA DAILY LOG - E Direction Date 16 Oct. 1966 E SPECIMEN Pg.# or DIR. BAND NO. REMARKS begin observation 06 45 SPECIES TIME light rain Alling Sumise ca 0719 0706 Wedge-tail shear. 6 light phase all mooning tool + forth around the ships 07/0 Juan Fernantiz for an 10 minute - Not vecessarily together 0715 Pomario a still around of 0728 ? Jacger 0716 Juan Fernandes 07/9 Wedge-tail - light phone Tainle ! Sheevwater NE 0720 light Phase 0728 Juan Fernander 0730 wedge toil light show JUAN Fernandy 0734 Petel 0740 Weeky - wil - light Phose VE 0745 UW 3 0745 2 UE 11 0746 3 0750 11 3 0755 2 P. exterior JFP 0755 P. externa 3 JFP 3 - light Phose 0755 weeks-toil 0803 Juan Fern Pet NW Shear - pet 0810 NW 0 0810 Juantam. Pet. 0812 Golden P. 0 0816 Wedgetail 1+ phase NW Juan Fern let Z 0825 NW 0825 It. phase wedgetail NW 0825 SI-MNH-958-e Rev. 5-66





NNW **OBSERVERS:** FUNTISE - 0800 BAH 0800 - 1500 LEWIS BALCOMB 1000 - 1200 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 17 at '66
Pg.# 1 SPECIMEN or DIR. BAND NO. REMARKS SPECIES TIME begin observations 0715 0722 Wedgetail E -light 073 BWP (00) Golden Mov. 0734 000 0734 -SUNRISE 0737 Wedgetail ? Qu. 0738 P. hypoleuca 00 0743 5/Stender 0845 5 6 Frigate 0846 White new Pet. 600 BWP (00) 0800 Wedgetail IVE 0805 P. hypolevca wedgetail 0833 NE 0837 Bonin Islund SE Pil mtsee rung 841 StomPetul BE 0955 P. externa Nowhite in underung 0906 Souty/5/1 Sw 0910 Wedler Tail SE Sw Mottled Pel Show Pot 0921 0422 very broad white rugs WRSP 0930 SW. 0957 Saity /5/6 SW white in underwing 1000 0 Black-wing Pet wedgetail - It. phase. 1001 0 adden Plover 1005 -circling ship 0 Birds . Ca 12 - terns I think. 1008 5w wedgetail. - It phose 1014 5 0 1016 -dark underwings 1025 500ty/5/6ill SE @ Black wing pet 1027 1029 Sooty /5/6/11 -light underwings 5W 1050 Golden Placer 0 1050 -circling ship. 1108 Wedgetail NW . It phone. SI-MNH-958-e Rev. 5-66

NNW **OBSERVERS:** 1000 -> 1208 BACCOWA SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 17 ocroses SPECIMEN Pg.# 2 or DIR. BAND NO. REMARKS SPECIES TIME 1115 Shear-pat 0 light underneath. 1127 Juan Fern. Pet. E 1142 Golden placer 0 circling ship 1143 wedgetail NU H. phase. 1155 Black-wing pet 0 1223 11 11 11 in close dessivately not P. h. hypoleuca 0 - monovour for general questas 1314 Shear-Pet. 1342 Goldon Planer 0 1410. - ship underway - slow adult circling over ship 1417 WITB 1430 wedgetail tocal light phase NE 1437 shear/pet. 5/alender 1440 light underwing 5-Colden Plover 1510 000 1512 welgetail 00 light 1513 Black-W. (00)e 1525 Wedgerail NE 1655 mottled Bt. light 5 1 Lphose Wedgetuil Squall NE 1111 N 1620 1620 Blue-Jucas Boshy light phase care of 5 grall wadge-thil 0 639 Sw Wedge-tail light phase 0 Sucarvale 1717 1814 Juan Fern. Pet NW Black-wing pet 1823 Juan Fern pet 1828 Shear-pet 1828 1845 4 phase wedgetail 1847 0 1849 Golden Plover - wedgetail 4. phase 1858 Shear pet Sunset dose observation 1907 SI-MNH-958-e Rev. 5-66

		T				BSERVE	RS:
					SMITHS	ONIAN INSTITUTION	
Shi	n		\			ISION OF BIRDS	
	rectio	n /			AT S	EA DAILY LOG - E	Data
			,	3	SPECIMEN		Date 18 oct, 1966 Pg.# /
					or		-8-11
	TIME	SPECIES	#	DIR.	BAND NO	REMARKS	
	0742	Bonin Is. pe	t to numero	-		- coming very close to ship	
	0742	4-1 1 . 1	tocoost				
	0752	Wedgetail Red-Costed la	"				
	103	ned-losted la	a numerous				
	0800 -		1				
						60 in sight of	wards to
	-					so in sight of	
						to le gravitating " towards Wedgetails numerous	ne. Appear
						111 0 2:1	Sw.
						Wedgetails numerous - also "gravitating" RFB passing by Srequent	rosd entirely
						light phase, also gravitating	to sw.
					1	and the state of t	y. Almadenticly
						COULTY / A	
	0800	- 00 T				BFB-oceasional and and imm	2
	-007	Golden P.	7_			I stand ca 6 miles done e	ast.
	1					first seen flying toward	les island the
		JF Petrel	1	000		ship.	, men
	0813	GE	1	(300			
	0815 -	G Fing	1 -			- no + a male.	
	013 =			-		Both Bon: -	
						Both Bonin I. and Wedge out considerably. Sun now 25- Less than 30 BIP in sight at wedgetail	tails have thinner
						Less than do BIP in sight of	30° alove borizon
	0820 -					weege laid	my one I me, < 10
						- < 10 Birds in eight at any or	ne time.
	0927						
		*******	7 10			The Red-fourd Books flying cx. 5 a	
						otheris al 1 100	sod + 1 sub och
						goods somes ins	ight melele.
				1		(legat plan) and I Bovin plant	
	0830				1		
		-		-	-	- less than in in in .	1
	0832	P. externa	0			time - these about equal num eight shore weeks - tails and is	any one
						Time - These about equal num	her of
	0935	Brown sool	7			2 ight phone Wedge - tails and 13	ioner folad Penes
						- Low x 1 50 b Hdulf?	
	0940	Rud foot sools Wedge-tont Sten	1	ud		1 1 1 1/1	
	0840	way-to-ster	(- hylot Place	, H
*	0440	11 11	1			" " Close observations at 084	
	0840	11 11	(" " " " " " " " " " " " " " " " " " " "	SI-MNH-958-6
					- 1	Close observations at 084	Z Rev. 5-66

ESE **OBSERVERS:** Sum 0700 - 0800 Harring ton 0900-1000 Lewis 1000-1200 . 50000 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 240 et 1966 SPECIMEN Pg.# _ or # SPECIES DIR. BAND NO. REMARKS TIME 0705 begin observation Wedgetail 0712 NE 0716 wedge tail 0722 0723 cee 0725 WRSP GOOD 0727 Black-W Pet 420 0736 Small Pterodrama 600 1740 WESD 200 0753 Wedgetail 1,ght E Mother Pat 1080 500 0806 BW Petrel 17 Hed Pet 0812 SW wedge-Tail Pterodrama SW Small 0855 8 Ptersolvena W 0904 0 2908 BWP Pexterna de 5925 Show/PET 5W 0932 Wedge 70,1 1.ght Following 54, 19 - whiterengs 1003 moffled Petral Phypoleuca N white below Shear - P.f . 5 1049 Emach 11 Oterodrova 1053 Black-wing N SI-MNH-958-e a Bonin be, Rev. 5-66

		E T				0)	BSERVERS:
			13		4		1000-1200 60012
					CMTTTTIC		1150-1400 BAH
		\times		-	SMITHSO DIVI	ONIAN INSTITUTION USION OF BIRDS	1600-1600 Lewis
Shi	p rection	7		,	AT SE	EA DAILY LOG - E	Date 24 October, 1966
	200020		1		SPECIMEN		Pg.# 2
	TIME	SPECIES	#	DIR.	BAND NO	REMARKS	
	1058	wledge-tail	1	W.		- lightphase	
	1122	11 11	1	SE	-	- light phase - walchelfer &	a suis de 0 · l · p
	1133	Shear-Pet.	1	NE		Troping and the winds of the en from the	a service -
	1142	welge-toil.	1	E	No.	- white below - - light phase	
	1146	Pterodrona	1	7		"THI WHIE	
	1152	wedgetail	2	por 19			
	1203	1.1		000		light.	
	1214	Black-W.P.	1	On.	The state of the s	7 3	
SF	1218	Shear-Pet	19±2				-
	1230	B W Po Wedgetical	.1	cess			
	1237	Wedgetian	1	cles		-1 int	
	1304	1)	2	人工	in the second	1 +	<u></u>
	1325	11	2.	ME	THE PROPERTY OF THE PROPERTY O	No.	
	1	BWRET.	2	de	the same that the special section is a second	t.	
	1353	11	1	Scale		*	
	1406	**	2	02			
	1415	11	7.	0	7		
	1424	11	1	SE	,		
		Shear / Pet	1	S	+		
	1434	B-WPet	1	2			
	1454		1	SE			*
	1525	1	1	E		Ad	
	1530	Bonin Island	.1	NE			
	1540	Sheur/Pet)	5			
	1603	Pterodram	. 1	NW			
	1627	P.L. hypolenea	1	SE			+
	11000			WE		= Fairy Terra	
*1	1111	the state of the s	,				
	1675	Banints. Or Black- any Patrix	1	5			SI-MNH-958- Rev. 5-66

OBSERVERS: 1600-11800 Gould DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 24 oct 26ex, 1966 SPECIMEN Pg.# 3 or DIR. BAND NO. REMARKS TIME SPECIES 1648 Black-wing 5 Petrel BONIN Ist. or Black-wing Petre/ light phase 1659 Wedge-till shearwater - peoding wations, but not positively seeding 1704 Great Frigate 0 17/2 SE Show-pet -5 mall, light colored - Bonin Island-type 722 Black-wing 5 1724 wadgetail 1724 It phase 1733 Black Storm - Solid Black allover, fail short Edefinitly shorter Petrel? then sooty stermpetral, constant loose wing boats 1739 but not sluttery slight of smaller storm petrols, BONIN IS17 3 Petrel appeared larger than heach's storm petrel-Lookeel + flew exactly as I remember Black storm 1749 Small Plenodina Sw Petrels off of California - Bird ca 100 yels from ship in relatively good light & watched for Shoon-Pet alleast amountes at this range, flew constudy Small low to water, but did not protter - pfg JE. Shran/pet 1804 Mothed P. shar/pot .. NE Wedgetail adult light phase Red J. Book ME 1830 Sunset - close dountins SI-MNH-958-e Rev. 5-66

OBSERVERS: Lew 15 0700-0900 60012 0410-1000 SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 250ct du 19 SPECIMEN Pg.# or SPECIES DIR. BAND NO. REMARKS TIME 0700 Sunordo 7BWP 2000 Vil Nu Bount slas N Nh Nu Now 0728 Wedge tail 1 ight Nu 0730 Bonin Islum 1 Oo SF going SE Terus of light 0812 Pforodrena + boroling N 0917 Phypolica 3 0823 P. 08 term ne 0825 Phypolena search mig ノロナマ 0 slight as the no slaps, bigh presulting seems 0826 west 0531 Small spernhum arr sam ching 0834 m 0847 Phypaleura Travelies NUN 0907 lange 26 pherodram Searching w SI-MNH-958-e either wedso-fail or land pleas. Sher Pet Rev. 5-66

Shi	rectio	n			DIVE AT SECUMEN OF	ONIAN INSTITUTION ISION OF BIRDS EA DAILY LOG - E	Date Pg.#	= Gentel
	TIME	SPECIES	#	DIR.	BAND NO	. REMARKS	V	
	0927	Black-wing Petrel		W		Ivanding		
0	0934	1 - 1 ESTEVE		5				
	0937	Shear - Pet	1	W				
	1001	Bettern	1	W				
	1027	Shand Pet	1 /	E				
FF	1843	Shea-1Pet	2515	CE"		eithy Perteria an	wedgestul	
		wader-tuil	2015-			light	7	
		P. externu	10+2					
	1048	JFP	1	E				
·	12 53	walge-tail	2	Q		light		
	16 58	Phypotoca	1	a		7		
	1134	11	1	N			*	
1		Fairy Tevs	2	SE				
	1141	wedyethil	2 2	and the same of th	-Togoth	er light phone		
		K. hypoluce	17	E				
	1145	BWP	1	F				
-		Fair y Ten	11 -	-		fritz .		
	1245	BUP	1	5		-following ship.		
FF	R47	Red Fait B Wedgetail	12-	anna ann an Airbhean		- Had light ph, I sul	adult.	
		Com Moddy	1			- tight phase		
		Shearpet Souty Ti	50					
	1300	WESP	2			-ad		
	1332	Shorlpot	1	SW.		looked like leach's		
	1335	Bird .		SW	-	-Probably sooty/slenderbil	1	
	1344	Fairy To Presidence		cus				
	and b	2P.	1	5				
	1725	Fairy Tetu	1	55				
	1450	Golden		0				
		plover)	0				
								SI-MNH-958-e
					-			Rev. 5-66

OBSERVERS: 1400-1600 Grule 1600-1800 BAH DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Direction Date 25 October, 1966 SPECIMEN Pg.# or DIR. BAND NO. REMARKS SPECIES TIME Red-Footed Ad Searching 1455 SE 3006 Fairy Tern together and apparently seeding but wied Form Pakel Not keep in sight for long enough to be sure, the stone potrals protology either heach I on than court but 1500 Pikypa lance 5 6 I continued value rung. 1506 Welgo fail SIE half pohase Fary Term traveling. SIE light phace - Inaveling 1512 Wedge hail 56 Black-airm searching 1521 Por . Iran thing 1524 FAIryTerw N -light phose 1526 walge hail w 1527 11 11 NN 1529 NE 1533 Black -wing search inc m 1540 Blue-Acy Nobby 1541 wedgetons - light Phone Fary Fran -an - Search SE feeding by Air dipping" 551 mall Pterodron 100 searching 1552 Black-wing m - dessinite, good view in clase pofs Petrel 400=100 FF 1100 CINITERN - Many were sitting on HiD (>50%) 25 = 5 F. TEVN Wedgetail 10±2 KFB - all and light ph G. Frigi Birds leaving the flock (mostly noddies) were heading M.E. Flock feeding overpredatory fish, water boiling "with fish flock observed 100=30 Haw. N. Tom < 5 minutes 1610 about 20 wedgetails passed in front of Ahip heading NIE in Davet 5 min. AN light except Idanic, 1615 Ca 15 WTS Passad un frant. SI-MNH-958-e Rev. 5-66

OBSERVERS: SMITHSONIAN INSTITUTION DIVISION OF BIRDS Ship AT SEA DAILY LOG - E Date 25 Oct. 86
Pg.# 4 Direction SPECIMEN or DIR. BAND NO. REMARKS TIME SPECIES 1625 light WITS 11/2 2 1630 BWP Clas 1633 WTS ME 1633 Feliry T. 400 1634 WTS 1636 BWP NE 1549 WIS 000 1650 WTS 10 Fairy Ti 1450 1650 LIE 1651 WTS NE 1652 WTS 11 1652 Fairy T. 71/ 1655 270 Class 1657 Fairy Terr ME 1700 WFS MIE 1702 WYE 1704 NE 1744 wedgeta. 1 FF 1710 600 water swirling white under the flock CNT Int. phase (190) Lt phase (9990) FT 2 Newells Sooty tern 1715 Wedgelail too numerous to count - everywhere are groups of 1-15 almost all It phase 1724 Fairy tern - Shear / Pet 75 500 BWP " 1748 WTS cas Myran M46 BWP MIM 1755 BB 18/0 Wedgetur N. Int Phase 18/4 Clase Olservetion SI-MNH-958-e Rev. 5-66

		F				OBS	ERVERS:
			/				0620-0800 -Goold
Shij	N —			-5	DIVI	ONIAN INSTITUTION ESION OF BIRDS EA DAILY LOG - E	Data a callaba (a)
		w	И		SPECIMEN		Date 26 October, 1966 Pg.#
-	TIME	SPECIES	#	DIK.	BAND NO	Gegin valde 0627	
	0635	Name of the last o					
	0642	wedge-toil	1	3	was the same of th	sauchy survise	
	07/0	wedge-toil	1	W	Month Street and Control of the Cont	- glimsed on a - stonged b	chid swell
SF	0816	wedgetail	16	E			
	0825	P. O. Thousand		Su		- 1 Pauls vest light	
	0842	Shear 1P. T	2	W	-		
Ž.	1850	Bon Jagar	1	w		Pauly light	
	0926	14	1	m.			
	0930	Ł1	t	W-		- //	
	0930	Committee of the Commit		anter ligar majo all'al Tri cale		· close observation	
					*		
		*					
	1						SI-MNH-958-e Rev. 5-66

		GC Ship			6	se No. <u>0</u> 003	3
	ise: Time_ et: Time_	1815W		Lat. 20-		ng	2 H.
Miles	s travelled	from 0000 hou from sunrise from sunset t	to sunset	= (64		
1.		IX TYPE OF I CELEST,		ATITUDE 0° 39.0 A	LONGITUDE		
2.							
3.							
4.							
5.							
	T. Pogitions						
	y Positions						1
Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt	11-22-
0100							11 - 22
03 00							
0400							
0600							/ · a :
0700							
0900							(#7)
1000							
1200							
1300	2/1	198					
1400	21-01'N	158-17'W	095	15000	112		
1600	20-56.24	155-1871W	087	17.5	080	3	
1700 1800	20-40.51N	158-515W	0601	15	080	3	
1900	20-38,5'N	159-05,3'W	633	16.2	673	3	
2000	20-31.5'N	159-16,0'W	076	14,50	050	3	
2100	20-17, 8'2	159-37.811	080	12	0.50	3	
2300	201181	159-1/9°W	078	11	6.00	2-	
2400	20-03 5 1	136 57,5 4	689	10	070	2	958 h -ST-MNH

Date 8 Oct '66 Ship Tawakow (010) Cruise No.0003 Organization Document Recorder Goved
Sunrise: Time 0637 Position: Lat. 19-08.5% Long. 161-08 w Sunset: Time 1839 Position: Lat. 17-47.6% Long. 163-31' L
Miles travelled from 0000 hours to sunrise = 86 Miles travelled from sunrise to sunset = 159.5 Miles travelled from sunset to 2400 hours = 72 TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE
1. 0612W Celestial 1900M 161-02.7W 2. 0959W Celestial 18047'N 161-992'W 3. 1236W Celestial 18°33,8'W 162-20'W 4. 1725W LORAW 17-52.3'N 163-12'W 5. 1905W Celestial 17-489N 163-36 W 2354136 5. 1905W Celestial 17-489N 163-36 W 2354136
Hourly Positions: Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt. Ol00 19-572'N 160-09'9'N 09'6 10 075 2 O200 19-43'N 160-21'N 109 9 085 2 O300 19-35'N 160-32'N 096 12 085 2 O400 19-27'N 160-425'N 165 20 085 2
0500 19-19'N 160-54'W 105 14 090 2 0600 19-13'N 161-01'W 110 13 100 2 0700 19-1355W 161-13'W 109 149 119 9

-							
0	100	19-572'N	160-09/9/1	086	10	0 7 5	2
0	200	19-43'N	160-21'W	109	C)	085	2
0	300	19-35'N	160-32'W	096	12	085	2
O	400	19-27'N	160-4251W	1050	20	685	2
O	500	19-19'N	160-54'W	105	14	090	2
0	600	19-13'N	161-0110	110	13	100	French
O	700	19-65.5 N	161-13'W	109	14.9	119	2_
O	008	18-59.31 N	161-24.7'W	10%	15	116	2
Ō	900	18-53/11	161-36.7 W	108.7	11	118	2
1	000	18-47'W	161-49,212	682,5	13	E 8 3000	and the same of th
211	100	18542111	161-595'W	031.	10	085	2
221	200	18 3751	162-12'W	081.5	12	085	2
231	300	18º28.9'N	1620 25,51	092	12.5	085	1
00]	400	18021.212	162°371 W	092	13	085	1
-	.500		1620491W	120	13	035	1
021	.600		163000.71W	085	8	11/11	es for a
031	.700	1800000	163°/2'W	045	7	11/11	11 / 01
171	.800	179523'N	163023.5'W	646	8	11/11	11/11
10.2			163°35'W	052	8	11/11	10/10
c C 2	000	12º38.7'N	163°47,2'W	616	8	100	P P Both Som
072	100	17º31'N	163°59'W	077	9	1/2	10/1
	200	17024,51N	164011:51W	077	4	14 f 11	P. Control of the Con
2	300	17º17.5W	164°23' W	091	9	10 / 12	· Application
2	400	17010,2'N	164° 35,2'w	1084.5	13	10 mm d	p & fall do

Date 9 8ct 66 Ship 77 Organization Posse	Recorder PSou	Cruise No. 000) 3
Sunrise: Time 0654/WPo	sition: Lat.	8.91 Long./65.55	6.6 N
Sunset: Time 1851 W Po			
Miles travelled from 0000 hours	to sunrise = 5	8.5	
Miles travelled from sunrise to	to the second second	5	
Miles travelled from sunset to	2400 hours = 5	5.7	
TIME OF FIX TYPE OF FI	X LATITUDE	LONGITUDE	
1. 0632 W Celestia	1 16°23.5'N	16505014	25
2. 1257 N ExtesTic	il 37 N	167 Cla, 2' W	737 S
3. 1858 W LORAN	140529 W	165 " 14.1' box	237 13.5
4.			
5.			
Hourly Positions:			

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
// 0100	17'03.5'N	164° 47.2°m	090	17	0 > >	
12 0200	16 55'N	114 59 21	092.5	13	11/11	11/ "
03 00	14° 477.8'N	165 11 W	086.5	12.7	2/10	2/1
14 0400	16 40'N	165022'W	073	8	11/11	10/11
1 = 0500	160337 N	162 34 ud	079	9	11/11	11/3
0600	16027.1'N	1 20 4/6/12	079	9	11/11	afi,
0700	160 9.21	165957,610	079	9	12/12	4/1,
0800	16012.2'N	166010.5' W	082	9	120	1
0900	1. 64.81	106 21W	100	9	095	
1000	1000 11	1660 1 hd	() () ()	10	090	/
1100	15 50 W	1 1/5 mg frot	7	9	095	/
1200	15044,2'23	166551,4'N	114	9/	100	/
1300	15° 64'N	1 12/14	177-5	12	100	
1400	15 30 11	16/15 W	1094	1	0 45	/
1500	2.11 14	1 = 29.5'W	135	9	0 75	1
c 21600	15014,4'N	8-: 41-64	11-	1.5	09	/
031700	15 = 01 L'XI	101 95:41 4	111	1,5	5 P	1
C /1800		1680000 101	11/1	13	1980	1
1900	14/0 100	16 . 14 . 14	1025	Dita	080	1
2000	14 (113,22)	161 20 0	104	10 to	1000	/
2100	140-77:211	168 515. 11	086,5	8	080	1
2200	1-1" 24.11	16 3 4 7	m66	11	S .	/
¥23 00	1402611	718235,54)	71	0 50	1
102400	145/1/11	169° 211 et	1 05	15	75	/

4+1-114
DateShip(0/0) Cruise No. 0003
Organization POBSP Recorder PSould
Sunrise: Time Position: Lat. 120/8.64 Long. 17/38.91 w
Miles travelled from 0000 hours to sunrise = 7/5 Miles travelled from sunrise to sunset = 12/7 Miles travelled from sunset to 2400 hours = 5/5
TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE COURTE
1. 064 IN CELESTAL 3 15N 100 01,5W 225 11,8 2. 132 YW CELESTAL 12029,5W 1700 54W 225 11
3.1941W Celestial 12° 21,2'N 171845.2'N 313 10.6
4.
5.
Hourly Positions:
Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

	TTITE	Lacicade	Tongroude	WILL DIT.	WILLU Sp.	wave DIT.	wave ngu.
	0100	14°02N	169 14,26	135	10	100	
	0200	13054N	169 2 711	1 3	11	25 23	1
	03 00	1304551	119 20,860	1 - 5	15	040	/
	0400	1	1-1-	W 64 T	Δ	888	j
	0500	1000 - 9, 1	1 = 9 = 1/3/2/2	105	6.5	090	1
	0600	13 22	169" 5461	1 3 7		110	1
	0700	p a so p	170 0354	, , , ,	See	100	1
	0800	13 04 51	170 116 841	/	25	110	pate
	0900	12 57.5N	178 30 lux	182		24.62	2
20	1000	12-50.0°N	170-30'W	1 6	C	110	
21	1100	12-43.5 N	170-37°W	116	9	130	2
22	1200	12-39'2	120-4230	118	10	130	- Dans
23	1300	12.35'N	170-50-6'W	1115	10	120	
00		12026'N	170657'W	115	10	110	1
01	1500	120/8.2N	1710042W	112	9	105	
02		12010,70	17/0/1.2'w	064	5	10 13	
03	1700	12007.3W	171020 W	1605	4	130	2_
04	1800	12012,5'N	171 295 W	A1. 3	Lenf	1.50	Dans
65		12018,6W	171034,9100	098	7.5	130	Harm
	2000	120235W	171048'W	263	515	130	107
	2100	12º33'N	171550, PW	215	5.5	130	02
03	2200	130 12 1 1 W	1711-7.111	253	12	b) fi	26 /12
09		120 70 Al	171042.7 W	255	12	88 100	e i pl
10	2400	12. 57.5 N	171034.8 W	260	13	CIYEL	

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			855 ATI				
Date_/	100	196 Ship	THERMORE	(010)) Cruis	se No. 00	03
		POBSP			A		
Organiz	ation		record	ler 190	400		
		17/2/1		> .	rosul.	15-0	
Sunrise	: Time	07/3W	Position:	Lat.	Lor	ng.	44.1'W
Sunset:	Time	1906 W	Position:	Lat./50	7.14, Lor	ng. 167 4	17.3"4
Miles t	ravelled	from 0000 hou	rs to sunr	rise = /	the same of the sa		
				1	1 -		7
Miles t	ravelled	from sunrise	to sunset	= 1/	2		
Miles t	rayelled	from sunset t	o 2400 hou	rs =	5		
				(manufacturing all parts)			A 1
	'IME OF FI	A	FIX LA	TITUDE	LONGITUDE		Cocks.
1.	1657	V Colost	12/ /3	50.80	17004/50	1216	246 103
						, ,	000 7 1 - 3
2.	3061	169/851	1al /4	039.7 N	169058	INC	1/2 /00
3. 10	7701.	1 /2/2	7 - 1 1/2	290 00	169051.	11,1	314 10
1.	30 U	CF/80	16/3	NO N	167 21,	100	317 100
4.							
5.							
Houndar	Pagitions						
пошту	Positions					1	
Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave H	gt.
0100	a A	1710321W	1110	12	06.60		
0200 /	" ' " f led	171°2.4.1'N	142	9	095	2	96
	18.9'N	1710/6.2'4	163	17	070	2	
-		171009,11W	116	7.5	075	2	977 90
		1716011	122	1/1	695		
0700 /3	305- 54	1700 14,114	133	1 2	095	1	
0800 /	/	110038 30	095	12	(F) (G	1	(
0900 14	1007.2'11	170°31.5"	112	6	095	7	
1000 14	1619 5" N	170 225'N	122	8	095	2	
1100	122.418	1100151611	122	8	095		
1200 14	13/3 N	175 00 50 11	300	2	190	1	
1300 /4	10 3 4 6 A	1 00.3 10	394	7	Page 1	A Comment of the Comm	
1400 /4	45.5 N	· W	293	3	090	1	
1500 /-	10 2 1	1-1 11.0 0	094	6	070	1	
1600 14	-Uni 1117	1,002,000	050	2	040		
1700 5	0/01/1	169051116	000	3	040	!	
1800 /	1812	169 216 64	050	3	040	11	-
1900 / 6	00000	147 11. 64	216	.5.5	11 33	11/11	
2100	-6-21 G ()	1 he 1 . 1 the	249	5	11 6	11/11	-
2200	2301	1	7 37			11'	
2300			160			(1)	
/ -	1 11 11 11	1 611					
	OlC'N		080	7,5	11/11	11/11	958 b -SI-MNH

Date 12 Oct 1966 Ship TAWAKE Organization Possp Re	corder P90) Cruis	e No. 000	3
Sunrise: Time 0715 Positi Sunset: Time 1915 Positi				
Miles travelled from 0000 hours to		72		
Miles travelled from sunrise to sun Miles travelled from sunset to 2400	9	111		
1. 0655W Celestial	LATITUDE	LONGITUDE		SPEED
2. 1947 W CP/85/101	and the state of t			10.3
3.4.				
Hourly Positions:				
Time Latitude Longitude Wind]	Dir. Wind Sp.	. Wave Dir.	Wave Hgt.	
1 0100 15002.11 170° 29,11 0 0 7 2 0200 14052.9'N 170°47.8'W 074 3 0300 14° 45°N 170° 55.6'W 074	Y 11 11	1/11	/,, /,,	
0400 14 37.8 N 171 33.8 W 1 5 0500 4029.9 W 171 12 W 616 0600 14 33 N 171 20 W	7 7.5		1/1	-
70700 14°14'N 171°28.2'W 19 50800 14°06.8'N 171°45.1'W 105 10900 13°57.5'M 171°45.1'W 12.5 1000 13°1-14 11254'W 76	12	110	1	
1100 13 5 1/1.9 N 172 02.2 N 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		140		+3
1400 13°17' N 172°27.8' N 1 / 3 1500 13°2 2' N 172°36.41' N 1 1 0 1600 13°31.2' N 172°36.41' N 1 1 0		180	2	
1900 13°5312'N 173°6 12 W 13°6 12	8,8	666		
2000 /4° = 2' N /73° ' : /n / / 2100 /4/ = /18,2' N /73° ' : /n / / 4 / 2200 /4° 18,2' N /72° ' K' & /		11 6 E	/	
2400 140 3 M 172 25.8 W 133	11	i i l		958 b -SI-MN

		ATEN			
	Date/3 Oct 1966 Ship Tour Sca	(010) Crui	se No. On C	3
			A		
	Organization Parse Rec	corder	owld		
	Sunrise: Time 07/6W Position Sunset: Time 1908W Position	on: Lat. 15 c	1		
	Miles travelled from 0000 hours to s	unrise = /	74/		•
	Miles travelled from sunrise to suns	et =	30/		
	TILLES CLAVELLEG LION SUILLISE CO SUNS	et =			
	Miles travelled from sunset to 2400	hours = 9	19.3		
	TIME OF FIX TYPE OF FIX	LATITUDE	LONGITUD	E Coo	(3) (1)
	1. 1669111 121-7		I make a		
	1. 0652W ColosTias 13	22.2 W	111 37	2 1 04	55 79
	2. 1930 W Cel-5/10/1	60 991 W	17/078	22 220	10.3
	3.				
	4.				
	5.				
,	Hourly Positions:				
	Time Latitude Longitude Wind D:	ir. Wind Sp.	Wave Dir.	Wave Hgt	•
10	0100 14° 40,3'N 1720 17.9'N		110		
	0200 14045.2'N 1720112W	6	100	,	
	0300 17 ° 25,3'N 172° 04,1'W		(1)	1	
	0400 150 7 171 9 50 7 10	7	10	7	
	0500 1 17/2 47	- 7	590	2	
47	0600 15017,9'N 1. 1'W	2.4	046	/	
18	0800 150311N 17162851W		890	1	
10	0900 150321 171026 111 3113		5.5	1	
20	1000 1500 50 10 1210 3 3	3 3	11/20		
21	1100 1900 8/1/1	p 5		1 1 1 1	
5-2	1200 / 200 2 200	The same of the sa	12	1000	
25	1300 1604,912 17001111111111111	5		and the same of th	
100	1400 1606,710 000, 3	6	the second second	11/1	
12/	1500 16° 18,9° N 6' U 250	6	11	17/1	
-2	1600 /6° 65'W 49'W 275	1-1	1. 11. 12	9/1	
	1700 160 1/000 17 W 070	La Company of the Com	11/1-	200	
	1800 16 ° 40'N 111 005, 2'W 260	6	1-/1		
	1900 16 3 1 N 1 1 Dy 0	1 3	7/1		
-	2000	5.5	P. C.	7	
	2100 /6° 15,3° N / 11° 37,7' 6 65	1/16			
	2300 10000000000000000000000000000000000	Alles A			

23 00 2400

172000,0'u

	/ <u>// 007</u> nization	- '46 Ship_	Record		_) Cruise	e No.	400
OI gai	112401011		Megor a	CI			
Sunri Sunse	lse: Time_c	A				5. 173° 55	
Miles	travelled	from 0000 hou	rs to sunr	ise =	75		
Miles	travelled	from sunrise	to sunset	= /	26		
Miles	travelled	from sunset t	o 2400 hou	rs =	19		
	TIME OF F	IX TYPE OF	FIX LA	TITUDE	LONGITUDE	Course	51
1.	6704	W C+/+5.	TIES 150	09.6'N1	720549	w 226	1
2.	13221	U Colos	To 140	04311	174002	316	1
3.		W Celes					
4.							
5.							
Hourl Time	y Positions <u>Latitude</u>	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.	
0100	معرد/	1-20 PM	1=69	4	11/00	1. 11.	
0200	2 1 1 RS	1 2 3 7 9 3 1 1 W	66.6	5	1 1 1		
14/0400	150 = 21	1120 84	0.56	0		00 11	
0500	1501812'N	12 1 - 8 CH	090	8	is fer	11/4	
	15016.5 RJ	1 & f " 'L	090	6	11/11	10/11	
0700	150 .511	e or or, of the	11 60/	12-	130	1	
18 0800	15 7'N	1230014	109	7	125	/	
19 0900	16031111610	13011,18	120	J. 6	125		
2 1100	1423611	173 30 7/41	126	C)	1:10		
1200	14097118	17 30 301100	102	5,5	1 1 1		
1300	14026.7 N	1730 1162 W	100	1-	A Comme		
1400	MIS I WA	173053,214		145			
1500	E = 1. 1	1740 003'W	<u> </u>				
021600	- 48'R	174007,916					
1700	14055.411	174015 W					
1800	143312	11407,1k					
1900	15 7 3 12	173010					
2000 7 2100	14. 15 201	1778 38 011					
2200	150 14 - N	1730 25 11					
2300	150 6 3348	17-018,11W					
5400	15° 1'N) ('					958 b -S

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Date / 5 Oci 16	& Ship / w	· / / / / / / / / / / / / / / / / / / /	_) Cruise	No.	
Organization	Rec	order			
Sunrise: Time 27/	19W Positio	n: Lat. 15	13.5 Long.	171056.9	'w
Sunset: Time 190	18 W Position	n: Lat. 16°	39.96 Long.	170° 21,9'w	
Miles travelled from	0000 hours to s	unrise =	75		
Miles travelled from	sunrise to suns	et = //	07		
Miles travelled from	sunset to 2400	hours =	64		
TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Fig. 200	Spe.eo
1. 0656W	ColesTial	15052'N	17291.4		10.2
2. 1389 W	11	16° 11.5'N	1710 89.5	w \$67	9.4
3. 1933W	1 (160 44.7'N	178° 22'	000	12.2
4.					
5.					
Hourly Positions:					
Time Latitude Lo	ongitude Wind D	ir. Wind Sp.	Wave Dir.	Wave Hgt.	
0100 150 271 172	2° 58,3'W 110°	6.5	120		
0200 15031,112 172	90,2 kg 100°	7	1410		
0400 15040 1 172	382 W 1000 093°	8.5	080	1	
0500 1504441 172	U18.11 093°	10.3	080		
0600 150 131 N 172	08.2 pt 124	10	080	1	
	1º00'lu 125°	1	085		
0800 15055.9NITI	°518 W 116°	9	090		
5.4	0 42.3'W 1250		090	1	
1000 160 02'N 171.	33.8'W 114'	9.5	090	1	
1100 160 04.9N 171	25,2 4/ 114°	95	090	1	

7 2 1200 16007'N. 1150 1710 18.5 W 090 1300 160 1150 090 168 1750 5 11 / 11 2.1 1500 RI'N 160 1176 1700 53'W 4.5 e 1 1600 160 25.7'N 170 11/11 44'60 1150 6 1700 1800 160 31.1'N 190° 1700 35,2'W 1.1 160 35,8'N 27'W 0900 1700 1440 6.5 1900 16 34.9'N 21,90 1700 1850 090 £° 12000 16050'N 0900 090 2100 1702.2'N1700 28'W 1280 .2.5 090 2200 170° 33'W 1130 100 2300 170 26.5'N1700 37.3'W 17,00 1440 100 2400 17039'N 1700 42'W 1400 60 100

Date 16 007 1966 Ship TAWAKONI (010) Cruise No. 0003

Organization 10358 Recorder 19 gould

Sunrise: Time \$719 \omega\$ Position: Lat. 19° \$2.7' N Long. 171° 2\$,5'\omega\$

Sunset: Time 1904 W Position: Lat. 21° 16.91 Long. 172° 13,8'w

Miles travelled from 0000 hours to sunrise = 89

Miles travelled from sunrise to sunset = 144.5

Miles travelled from sunset to 2400 hours = 62

One control of the co	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0707w	CELESTIAL	18° 59.8'N	171°19.1' W	339(1)	12.8 KTS.
2.	1311 w	//	20° 11.6 N	1710 48.4' W	339 (7)	12.2 KTS.
_3.	1934 w	11	21° 23'N	172º 16' W	339 (7)	12.5 KTS
4.						
5.						

Hourly Positions:

1100

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
W						
0100	17° 50.8'N	178° 51.2' W	1400	5	11/11	11 / 11
0200	18082.6 N	170° 56,4' W	1400	6	11 / 11	11/11
03 00	18°08.7'N	171001' W	1450	6	11/11	11 / 11
0400	18° 24.71 N	171° \$5.1' W	1090	b	11/11	11/11
0500	186 36.3' N	171° 89.8' W	1070	5	11 / 11	11 / 1.
0600	18° 47.9' N	1710 14,3' W	1340	6	11 / 11	11/11
0700	18° 59.8' N	1710 19,1' W	1210	8.5	11 / 11	11 / 1
0800	19° 10.5' N	171° 23.2' W	1210	8.5	11 8 11	[1]
0900	190 22.2'N	1710 25 W	1110	7	11/1.	11 / 11
1000	196 34.51N	171° 33.3'W	1100	6.5	11 / 11	11 / 11
1100	140 465'N	171° 37.8' W	1100	4	11 / 11	11 / 11
1200	19 59.6' N.	171°43.8' W	1200	7	11 / 11	11 / 11
1300	20° 11.6' N	171º48,4'w	1800	7	1. 1. 1.	11 / 11
1400	200 20' N	171248.8 43	1800	7	11/11	11 / 11
1500	20° 30,8'N	1710 541 0	1800	7	0/11	11/11
1600	20° 43.1'N	1710 58' 10	108.	4,5	11/11	11/3:
1700	20° 54.7 N	172° 03.2' W	1100	5	11 / 11	11/11
1800	71°05.4'N		1360	9	11/11	11/11
1900	21º 16.9'N	172° 13.8'00	1420	6.5	140	1
2000	51,58, N	177018, 00	1426	6.5	140	1
2100	21° 40' N	1726 27,3 (6)	134°	6	11/11	11/11
2200	210511 N	1720 27.2 4	143	97	11/11	11/11
2300		1720 331 (1)	1380	7	025	200
2400	220 15,3 N	172° 37.2' &	1380	9	620	2

Date 17 OCT 1966 Ship TAWAKOWI (DIO) Cruise No. 003

Organization Posse Recorder Posse Sunrise: Time 9731 W Position: Lat. 23°48N, Long. 173°15'W

Sunset: Time 1909 W Position: Lat. 21'059.4/ Long. 173°32'N

Miles travelled from 0000 hours to sunrise = $90m_{\odot}$

Miles travelled from sunrise to sunset = 36 m

Miles travelled from sunset to 2400 hours = 29

		b .			1	
	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	Ø7Ø5W	CELESTRIAL	23°33,2'N	173°12,7'w	339°CH	12.3 KTS
2.	1939W	Celestrial	25-001.610	173032.2'a	1325 (7)	5,345
3.						
4.						
5.						

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	22° 27,2'N	172° 423' 6	1340	8	020	Proces
0200	220 39' N	1720 47,71 0	1340	9	020	2
03 00	22° 51,7'N	172°53,1' W	1340	q	020	2
0400	23° 02,7'N		150	7.5	145	2
0500	230 13,5'N	1730 04' W	1500	'7	1 01 5	2
0600	23° 20.4' N	173° 08,9° W	150 0	7	1615	2.
0700	230 32' N	173° 12' W	150 6	7	145	2
0800	230 441'N	1720 17.1' W	1400	7	145	2
0900	230 S. N	17302 15 W	3400	60	e and is	2
1000	We had N	1. je = 1. 1 w	3 - 3 E-00	pro the	1 = 2	10213
1100	190' N	w	3 50	AND THE PARTY OF T	1613	4
1200	1 51,5' N	1730364 0	154	(n	150	1
1300	24'36' N	17 = 35.9' al	188	· autor jetos	1 4 7 2	
1400	24/40,2' N	173 35" W				
1500	240 43.51 N	173034.8' 41				
1600	21/047.31 N	173° 33.5° W				
1700		173033.21 01				
1800	205 7 N	1/30 27.4' W				
1900	24059.4 N	173 32 ' W				
2000	25002.71 N	1936 2.5 111				
2100	2508,2'N	1730371 W				
2200	250/3' N	17304/151 W				
2300	25013 N	17301/3, W				
2400	25023.7'N	17300000 W				

Date 18 Oct 1966 Ship nuckeri (010	
Date / Del Mais Ship www. (010	Cruise No
Organization Recorder Programme	
Sunrise: Time 0737W Position: Lat. 25°	3891 Long. 1751-11'W
Sunset: Time Position: Lat.	, Long
Miles travelled from 0000 hours to sunrise =	54.3 Be consent
Miles travelled from sunrise to sunset =	771
Miles travelled from sunset to 2400 hours =	
TIME OF FIX TYPE OF FIX LATITUDE	LONGITUDE
1. 0709 5ta 2602	1740 21 (End too policele)
2.	
3.	
4.	
5.	
Hourly Positions:	
Time Latitude Longitude Wind Dir. Wind Sp.	Wave Dir. Wave Hgt.
10100 250231N 174 ECO 3/W 180	11/11 21/11
10300 25° 37° N 174° 07, 41 W 180 12	120
10400 25 36.5 1740158 W 120	190 1
0500 25 50.9 N MIN 17 W 185 9	165
70700 250 1 1 14019314 165	1200
0800 26-647N 174.6.21N 160	150 3
1000 Michini (1)	·
1100 Li Leanski (12.	
1200	
1300	
1400	
1500 1600	
1700	
1800	
1900	
2000	
2100 2200	
2300	
2400	958b-ST-MNH

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Date	20 007	66 Ship	USS AT	4 (610	_) Cruis	e No. 0003
Organ	nization	000358	Record	ler ngo	when I	
Sunr:	ise: Time_		Position:	Lat.	, Lon	g.
Sunse	et: Time_		Position:	Lat	, Lon	g
		from 0000 hou		\$ 000 market and \$100 market a	- Companyon phoposy	
Miles	s travelled	from sunrise	to sunset	= /	35	
Miles	s travelled	from sunset t	to 2400 hou	rs =		
	TIME OF FI	X TYPE OF	FIX LA	TTTUDE	LONGITUDE	
1.						
2.						
3.						
4.						
5.						
	y Positions	3.2				7
Time	Latitude		Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
	1		White Date	willia by.	WAYC DII.	wave ngo.
0100	Auc,	GORED OFF				
0300	115121	111 TELBIO	1212	3/ 24:		
0500	Morning	DKI ISHAD	(2600	3:2N	174001	3/1
0600						
0700						
0800						
0900	26°05'N	124 002 8/10	1297	13	145	1
1000	3000000	175003141	201	13.5	150	1
1200	9502936	1770351	10/	12.5	150	
1300	25 950, 1'12	122001111	160	3	190	
1400	2504951N	173005/11	15-0	7	140	5
1500	25049'N	172052,9'w	140	3	140	2
1600	25 48,5 N	172° 38,8 W	153	143	120	2
1700	25047.8'N	1726245"N	1,160	8	130	2
1800	350 473 N	172010,50	15-7	12	125	2
1900	25046.9'N	11/36.74	160	12	125	2
2000	DATE II	250 250				- 121
2200	100000	10 000	40			
2300	111/50	W 15 1	25041	2.4/1/	1710215	7'6
2400						

19222200000

Date 23 Oct 66 Ship TRWHKON! (010) Cruise No 2003
Organization Recorder Pgo A
Sunrise: Time Position: Lat, Long Sunset: Time 19/6 Ul Position: Lat. 25-13.2'W, Long. / 7/-//-2'ul
Miles travelled from 0000 hours to sunrise = Miles travelled from sunrise to sunset = 5/ Miles travelled from sunset to 2400 hours = 5/ TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE
1. 1924 Celes Ticl 25-12'N 121-11.5N 12'/-8.5 2. 3. 4. 5.
Hourly Positions: Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt. 0100 0200 AnchoRed 0300 Ofc 0400 Jay SAN IJ

0100					
0200	ANC	LORYd			
03 00	off				
0400	1 AY.	SANIT			
0500					
0600					
0700					
0800					
0900					
1000					
1100					
1200					
1300	25-47.2'N	171048,2 W			
1400	25-40.7'N	171° 48,5 W			
1500	25-355'N	1710 4/1,2'W			
1600	25-29.8'N	171039W			
1700	25-24.8'N	1710 26,51 N			
1800	25-19'N	1710 18 9 109			
1900	25-13.8 M	1710/11000			
2000	25-08,91	171 05 W			
2100	25-01. 812	170-53.5 2			
2200	24-041	170-15,1 h	1		
2300	24-76 376	170-51.514			
2400	24-3951	170-20,16			

Organization		Recorde	er			\$e:
Sunrise: Time O	716	Position:	Lat. 24-	05.7 Long.	168-495	9/
Sunset: Time /	333			7.2 31 Long.		
Miles travelled fr	om 0000 ho	urs to sunri	se = 9	4/		
Miles travelled fr			- 1	12		
Miles travelled fr				2		
MITTER CLANETTER IL	om sunset (30 2400 nour	S = 0			
		דון אינד אינד		TANATATA	150000	5
TIME OF FIX	TYPE OF		TTUDE	LONGITUDE	(OURSE	5
TIME OF FIX 1. 00 49			1	LONGITUDE 169 - 50'W;		5
1. 00 49	C 2 / 5 7	1AL 21/-	-07.2a		107	5
1. 00 49	Ce/185	TIAL 23-	-07.2'al	169-50'W;	107	5

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
/ 1 <u>0100</u> / 1 <u>0200</u>	24-31.7'N	1 - 2 . 1 pm	060_	15	069	3
0300	24-21,500	169-45,94	080	25	665	3
0500	53 4 106 111	169-1515W	110	25	065	3
0700	21-106,01N	168-48'W	103	20	000	
19 0900	24-01.212	168-22,8 "W	085	20	070	7
2 1100	23-53'N	67-47.51W	080	18	670	The state of the s
1300	23-496 N	With his his	100	2.7	065	3
1500 1600 1700	23-31.94	67 m 63,8 W	050	20	065	3
E11800	of the state of	166-29.12 66-29.12 66-17.61	090	22	065	3
062000	23-23/N	(6-04,71W	080	32	065 065	7
06 2200 08 2300	23-155 10	165-39,14	090	18	065	3
10 2400	23-07.511	165-14/11	080	20	060	

Date 25 Oct '4	Ship THUR!	KONI ())) Cruise No	
Organization	Re	ecorder		
Sunrise: Time O	700W Positi	on: Lat. 22-	-39,5, N _{Long.} 16	5 - 111
Sunset: Time /	3/2W Positi	on: Lat. 21°	51.2 N Long. 16	1° 23.8'w
Miles travelled fr	om 0000 hours to	sunrise = 2	36	
Miles travelled fr	om sunrise to sun	set = <u>/</u>	40	
Miles travelled fr	om sunset to 2400	hours = 6	7,5	
TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COORSE
1. 6631	CEPESTIAL	22-41181	163-57,4/2	10 7
2. 1300	LORAN :	22-15	162-31,5	109
3. 181/6 m	C+/65/10/5	71-49.5	161-20.5	109
4.	Action of Space (Space)			
5.		77		

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
110100	23-5° M		075	18	660	3
120200	23-00.0'N	164-49'W	137 25°	18	060	3
130300	22-55,912	164-36,2'W	1 6 55	19	065	3
14 0400	22-51.6'N	164-23.8 4	090	20	065	3
0500	22-47.81	164-10841	090	24	0)0	3
0600	22-93,712	163-58.1'W	080	20	020	3
7 0700	22-398 2	163-46 4	090	20	6235	in the second
0800	22-3571W	143-32,11W	090	20	0850	"Sur
90900	92-31.3'N	163-20.5W	069	12,5	Contraction of the comment	etijth.
2 1000	98.27,414	163-68,9°W	038	13	085	3
1100	29-23/N	162 - 55,5'W	638	13	085	
11200	22-19'N	162-111W	090	15	090	4
1300	22-15-11	162-31.512	690	14	090	5
1400	29-10-17/4	162-18,2 W	040	10	050	4
1500	27 05.8	162-06,3 W	040	10	050	Ы
1600	-013W	161-53.8 W	645	12	050	2
1700	21-57.2° N	161-41,4' W	055	12	055	2
	21-52,30	161-28,1 W	055	16	060	2
1900	21-48/N	161-16,5 4	045	15	060	2.
2000	21-44,74	161-05. W	050	15	060	2
2100	21-40.5'N	160-518'W	070	15	060	2
2200	21-38' N	160-39.2' 20	080	20	060	2
2300	21-32,91 N	160-26,9 W	080	20	070	2
2400	21-30.0'N	160-13.81 W	642	14	050	2

Date	26 Oct, 1966	Chin Taura	Lance (ATE			
	nization		ecorder_	(4) Cruise No		
Sunri	ise: Time 63		lon: Lat. 21-	, Long		
Miles	travelled from travelled from travelled from	sunrise to sur			5 miles from Sun. to Paul	Horbor
1711.1.0.0	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Course	pasad
1.	9611	CELESTIAI	21-14'N	158-34.2'0		12.3 kts
2.						
3.						
4.						
5.						
Hourl	y Positions:					
Time	Latitude Le	ongitude Wind	Dir. Wind Sp.	Wave Dir. Wa	ve Hgt.	
0100 0200 0300	21-27.5'N 160 21-24.7'N 159 21-22 'N 159	-02'W 042 -49.2'W 042 -372'W 063	- 14	050 050 060	Z. 3 3	

1,1110	<u> </u>	TOTIGITUDE	WING DIF.	wind Sp.	wave Dir.	Wave Hgt.
0100	21-27.5'N	160-02'W	042	14	050	2.
0200	21-247N	159-49.2'W	042	14	050	3
03 00	51 - 55 N	159-372 W	063	14	060	3
0400	51-18 N	The state of the s	070	12	060	3
0500	21 - 16,5'N		090	12	080	3
0600	21 - 14.2 N		090	10	GSO	3
0700	21 - 14.2 W	158-46.8 W	090	10	080	and the second
0800	21-14"1	158034.21W	090	10	C 8 C	
0900	21-14,512	158-21.41W	050	10	10 100	1 1 1
1100						
1200						
1300						
1400						
1500						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						

PRELIMINARY REPORT

NORTHERN GRID SURVEY NO. 32

and

NON-GRID PELAGIC OBSERVATIONS

October 7 to 26, 1966

prepared by

Patrick J. Gould

PELAGIC SURVEY REPORT

This report is a preliminary analysis of the pelagic field work conducted by the Pacific Ocean Biological Survey Program from 07-26 October, 1966. Any discussion of the data contained herein is purely speculative in nature and should not be relied upon until a more critical analysis, including comparison with existing and future data, can be made.

Logistic support was provided by the U.S.S. Tawakoni (ATF 114) whose officers and crew cheerfully cooperated with the Smithsonian personnel whenever necessary. They were also responsible for the collection of all weather and position data. P.O.B.S.P. personnel included Patrick Gould (Biologist in Charge), Ken Balcomb, Brian Harrington, and Jim Lewis.

Weather conditions were excellent with relatively low winds and calm seas except for the return trip along the Leeward Islands when winds reached 20-25 knots and the seas became very rough.

A total of 1,655 miles and 146.8 hours of diurnal observations plus an additional 777 miles and 72.6 hours of nocturnal observations were completed. As in other surveys, the data was gathered over linear transects with the ship moving at from 10 to 13 knots most of the time. The general area covered was from Oahu to the Northern Grid (3 days), the Northern Grid Proper (6 days), the Northern Grid to Lisianski (2 days), and from Laysan to Oahu (2 days). This was the first time that pelagic observations had been made along the Leeward Islands in October.

During this period a total of 25 species (12.6 per day) plus two recognizable subspecies was recorded. Although this is somewhat higher than in previous years the latter have been thought to be too low and it is believed that this current data are quite normal for this area at this time of year.

-

1211

The total number of birds recorded was 4,279 (2.59 birds per linear mile). Although this is almost identical to previous findings it is not comparable because of the inclusion of Leeward Island observations in this month's data. The number of birds in the vicinity of the Leeward Islands is almost always much greater than in more distant pelagic areas. This greatly increases the final density figures. It is felt, then, that the total density of birds within the area for the current survey was much lower than expected from previous data. The most conspicuous reason for this low density was the relatively small number of Sooty/Slender-billed Shearwaters moving through the area. The total density for these species was only about 30% that of previous averages.

The following report is divided into sections which roughly correspond to three basically different areas. 1) includes the area from Oahu to the Northern Grid and from the Northern Grid to the Leeward Islands. 2) includes only the Northern Grid proper. 3) includes the length of the Leeward Islands from Laysan to Oahu.

SECTION 1 - NON GRID

This section covers the pelagic area between the Hawaiian and Leeward Islands and the Northern Grid. It excludes the area within one day of the Leeward Islands but includes a partial day off the island of Oahu. No nocturnal observations were conducted and the collection of specimens was not attempted although one bird that flew on board was retained as a study skin.

A total of four and one-half days of pelagic observations was conducted in this area covering a total of 620 miles and 53.0 hours. During this period a total of 1,426 birds (2.3 per linear mile) was recorded (See TABLE I).

TABLE I
DAILY AREA COVERAGE

Date	No. Miles	No. Hours	No. Birds	No. Species
07	64 160	5.6 12.0	392 188	10+ 13+
09 16*	165	12.1	600	13+
16*	145 86	11.7	154 92	14+
Total	620	53.0	1426	23+

^{*} These days were both over farther to the west than the previous three.

A total of 23 species plus two additional recognizable subspecies and one extra questionable species were identified (See TABLE II). The following paragraphs contain discussions of only those species for which additional data was obtained but not included in TABLE II.

TABLE II
SPECIES COMPOSITION AND DENSITY OUTSIDE THE NORTHERN GRID

Species	Number	No. Lin. Mi. N	o. Coll.	Status over prior* October averages
Wedge-tailed Shearwater	257	0.415	0	same
Sooty/Slender-billed Shearwater	66	0.106	0	same
Christmas Island Shearwater	1	0.002	0	greater
Pale-footed Shearwater	1	0.002	0	same
Newell's Shearwater	4	0.006	0	same
Dark-rumped Petrel**	3	0.005	0	?
Pterodroma externa (Total)	154	0.248	0	greater
Juan Fernandez Petrel	128***	0.206	0	?
White-necked Petrel	4 ***	0.006	0	?
Mottled Petrel	14	0.023	0	greater
Pterodroma hypoleuca	70	0.113	0	fewer
Bonin Island Petrel**	2 ***	0.003	0	?
Black-winged Petrel	65***	0.105	0	?
Bulwer's Petrel	4	0.006	0	same
Leach's Storm Petrel***	9	0.015	0	fewer
Red-tailed Tropicbird	9	0.015	0	same
White-tailed Tropicbird	4	0.006	0	fewer
Blue-faced Booby	2	0.003	0	fewer
Red-footed Booby	5	0.008	0	same
Great Frigatebird	4	0.006	0	fewer
Golden Plover	12	0.019	0	same
Ruddy Turnstone	2	0.003.003	0	same
Spotted Sandpiper	1	0.002	1	first record
Sooty Tern	209	0.337	0	greater
Common Noddy Tern	7	0.011	0	fewer
Fairy Tern	2	0.003	0	greater
Pomarine Jaeger	6	0.010	0	greater
Unidentified birds	580	0.935	0	

^{*} See memo "Birds Between Oahu Island and Johnston Atoll (more than 100 miles from land), October 1965."

^{**} Identification unreliable.

^{***} Includes all white-rumped Storm Petrels.

^{****} Included in above total.

Note: Black-footed Albatross, Kermadec Petrel, and Japanese White-eye have all been recorded in previous years in this area.

Wedge-tailed Shearwater: 49 percent of all birds observed were within 65 miles of Oahu. The rest were divided rather evenly throughout the remaining area.

Ninety-four percent of the 174 individuals identified to colorphase were light-phase birds, while only <u>ca</u>. 03% were intermediate-phase and <u>ca</u>. 03% were dark-phase. It is noteworthy, however, that five of the six dark-phase birds were observed in the same area (<u>ca</u>. 15°44'N- 166°54'W) which was the southernmost area involved in this section. The higher density of dark-phase birds encountered further south (see next section) indicates that these birds may belong to the southern island population. If this is true then this is far north of their previously observed distribution at this time of the year.

Sooty/Slender-billed Shearwaters: Of the 59 birds for which the underwing could be seen, 33 had white while 26 had dark.

Of the 65 birds recorded, 40% were headed south, 40% were headed southeast, and 20% were headed southwest. This is a similar situation to that found in the early (September) migrants for previous years and may indicate that the migration is late this year.

Christmas Island Shearwater: Although expected, this is the first record for this species in this area during October.

Pterodroma externa: This is an exceptionally high density for this area but former data were, at best, relatively unreliable and information from other areas indicates that the present surveys' figures are probably accurate.

Mottled Petrel: This was an exceptionally heavy migration being more than twice that of former records for this area.

Pterodroma hypoleuca: Although the density level this month was below that of previous years, the relatively unreliable former records make it impossible to compare data.

White-rumped Storm Petrels: Over half of the birds observed had very broad white rumps indicating possible Harcourt's or Wilson's Storm Petrels.

Blue-faced Booby: One orange-streamered bird was observed at 18°07'N by 163°01'W on 08 October. It was a sub-adult and the streamer appeared to be very new.

Spotted Sandpiper: One bird flew on board on 09 October at 14°59'N by 168°05'W and was collected. This is the first pelagic record of this species by this project.

Fairy Tern: Although expected, this species has not previously been recorded in this area during October.

SECTION 2 - NORTHERN GRID

This section covers only the Northern Grid proper. Complete diurnal and nocturnal coverage was completed and specimens were collected where possible. A total of six full days and nights of observation covered 1,530 miles and 144.0 hours (See TABLE III).

TABLE III

DAILY AREA COVERAGE

Date	No. N	Miles	No. Ho	ours	No. I	Birds	No. S	pecies
	Day	Night	Day	Night	Day	Night	Day	Night
09	0	64	0	5.0	0	68	0	3
10	127	135	12.0	12.0	151	22	12	6
11	123	129	11.9	12.1	104	11	11	4
12	136	126	12.0	12.0	166	15	14	4
13	134	124	11.9	12.1	119	9	12	5
14	126	124	11.9	12.1	374	7	14	2
15	107	75	11.7	7.3	148	1	16	1
Total	753	777	71.4	72.6	1062	133	22+	8+

A total of 22 species plus one additional recognizable subspecies was recorded (See TABLE IV). The following paragraphs contain discussions of only those species for which additional data were obtained but not included in TABLE IV.

Wedge-tailed Shearwater: 63% of those birds identified to color phase were light-phase birds while the rest were dark-phase birds. It is interesting that all but one of the nine dark-phase birds recorded were south of 14 degrees North while all of the light-phase birds were north of 14 degrees North.

Scoty/Slender-billed Shearwater: Of the 295 birds for which direction of flight was recorded, 45% were headed south, 34% were headed southwest, and 21% were headed southeast. This is a similar pattern to the early migrants (September) found in previous years and may indicate a late

TABLE IV

SPECIES COMPOSITION AND DENSITY WITHIN THE NORTHERN GRID

Species	Number	No./Lin. Mi.	No. Coll.	Status over prior* October averages
Wedge-tailed Shearwater	26	0.035 035	- 0	-0.07 B/L.M.
Sooty/Slender-billed Shearwater		0.401	0	-0.86
Christmas Island Shearwater	1	0.001	0	same "
Pale-footed Shearwater	8	0.011	0	+0.01 "
Pink-footed Shearwater	1	0.001	0	+ 11
Dark-rumped Petrel	3 ×××	0.004	0	-
Pterodroma externa	110*	0.146		+0.08 "
Juan Fernandez Petrel	75***	0.100	4	N.R. "
White-necked Petrel	5 ***	0.007	. 0	N.R. "
Kermadec Petrel	1	0.001	0	same "
Phoenix Island/Tahitian Petrel	3	0.004	0	+ "
Mottled Petrel	45	0.060	0	+0.05 "
Cook's Petrel	2****	0.002	0	-
Pterodroma hypoleuca	48	0.064		+0.04 "
Black-winged Petrel	43***	0.057	1	N.R. "
Bulwer's Petrel	10	0.013	0	+0.01 "
Leach's Storm Petrel**	10	0.013	0	+0.01 "
Red-tailed Tropicbird	24	0.032	4	+0.01 "
White-tailed Tropicbird	3	0.004	0	+ 11
Red-footed Booby	14	0.005	0	+ 11
Great Frigatebird	18	0.024	0	+0.01 "
Golden Plover	38	0.050	5	+0.02 "
Sooty Tern	173	0.230	Ō	-0.08
Gray-backed Tern	1	0.001	0	+ 11
Common Noddy Tern	3	0.004	1	same "
Fairy Tern	4	0.005	0	same "
Pomarine Jaeger	7	0.001	0	+ "
Long-tail Jaeger	1	0.001	0	
Unidentified birds	222	0.295	0	-

^{*} See April 1966 Report

^{**} Includes all white-rumped Storm Petrels

^{***} Included in above total

**** Identification uncertain

Note: Bonin Island Petrels, Blue-faced Boobies, and Brown Boobies have been reported from the gird in previous years but never commonly.

migration for 1966. If this is the case then next month's (November) total should be very high. If November totals are not high then another explanation, possibly that of sampling error which can be great when dealing with migrating birds, must be investigated.

Pale-footed Shearwater: Although only eight birds were recorded this is still a remarkably high number, but may be explained by improved field capabilities on the part of the investigators.

Pink-footed Shearwater: One bird with a large pale-colored bill was observed at close range on 12 October. This is the first record for the grid area.

Pterodroma externa: Although former records for this group are relatively unreliable, the 50% increase over the expected density may be meaningful.

Pterodroma hypoleuca: The high density this month as compared with previous years is probably mostly due to past problems in identification.

Phoenix Island/Tahitian Petrel: The three birds recorded this month constitute the first reliable record of this species pair within the grid area.

White-tailed Tropicbird: Although expected, these are the first October records for the grid area.

Red-footed Booby: In former years the first birds of the season did not appear until November. Four birds is thus a large number to be found at this time of year.

Gray-backed Tern: This is the first record for October within the grid area.

The overall density for birds within the grid is much less than was to be expected from previous data (See TABLE V). This is largely the result of the failure of Sooty/Slender-billed Shearwaters to pass through the area in large numbers. Increased numbers of Pterodroma, especially Pterodroma externa, tended to offset the lack of shearwaters to a small extent. Sooty Terns were also below the expected density level, but not drastically as in the above. All other species groups showed higher densities than were expected.

TABLE V

DIURNAL ABUNDANCE OF SPECIES GROUPS WITHIN THE NORTHERN GRID

Species Group	Number	Birds/Sq. Mi.	Estimated Pop.	Expected Pop.*
Shearwater-Petrel Tern Tropicbird Frigatebird Storm Petrel Booby Shorebirds Jaegers Unidentified	711 231 30 22 12 4 38 6 8	0.47 0.10 0.02 0.01 0.02 0.002 0.005 0.004	23,600 5,000 1,000 350 750 100 2,500 250	44,500 7,200 500 50 25 100 ?
Total birds	1062	0.68	33,850	54,400

^{*} See April 1966 Report

A cursory examination of the data indicates that bird density was highest in the West Quadrant of the grid (almost double that of any other quadrant), and lowest in the East Quadrant.

Relatively few nocturnal birds were seen. The total of 133 (see TABLE VI) includes a flock of 12 Sooty Terns and 50 Shearwater-Petrels about three minutes after sunset on 09 October. This presents a heavy bias to the data since, had the ship been moving somewhat faster, we

^{**} Includes Shorebird and Jaeger figures

would have recorded these as diurnal birds. The only night when birds were relatively numerous and constantly about the ship was on 10 October in very rainy and overcast weather. At this time the birds were attracted to the ship's lights. Excluding the large flock of birds just after sunset, the greatest numbers were observed during the fifth and sixth hour after sunset. This is consistent with previous findings. (See Table VII.)

TABLE VI

NOCTURNAL ABUNDANCE OF BIRDS WITHIN THE NORTHERN GRID

Species	No. Birds	Birds/Night
Sooty/Slender-billed Shearwater	3	0.50
Wedge-tailed Shearwater	1	0.17
Juan Fernandez Petrel	6	1.00
Mottled Petrel	1	0.17
Black-winged Petrel	3	0.50
Red-tailed Tropicbird	3	0.50
Golden Plover	5	0.83
Sooty Tern	20	3.33
Shearwater-Petrel (unidentified)	66	11.00
Tern (unidentified)	2	0.33
Shorebirds (unidentified	1	0.17
Birds (unidentified)	21_	3.50
Total	133	22.17

TABLE VII
HOURLY NOCTURNAL FLUCTUATION IN BIRD NUMBERS

Date	Hours 1	after 2	sunset 3	4	5	6	7	8	2	10	11	12	
09-10	62	0	0	0	6.	9	5	1	0	2	3	0	
10-11	0	0	0	1	1	1	1	1	0	0	0	1	
11-12	1	0	1	3	2	1	1	0	2	1	1	0	
12-13	0	1	5	2	1	0	1	0	0	1	1	3	
13-14	2	1	0	0	0	0	0	0	0	1	0	0	
14-15	.0	1	3	1	1	0	0	0	0	0	0	1	
Total	65	3	9	7	11	11	8	2	2	5	5	5	

SECTION III - LEEWARD ISLANDS

This section covers the pelagic area between Laysan Island and Oahu Island. No nocturnal observations were conducted and the collection of specimens was not attempted. A total of two days of pelagic observations was conducted covering a total of 282 miles and 22.4 hours. (See TABLE VIII.) During this period a total of 1,791 birds (6.35 per linear mile) was recorded.

TABLE VIII

DAILY AREA COVERAGE

Date	No. Miles	No. Hours	No. Birds	No. Species
24 25	142 140	11.2	100	11+
Total	282	22.4	1791	17+

A total of 17 species plus one recognizable subspecies was recorded (See TABLE IX). The Wedge-tailed Shearwater counts are muc too low since in one area these birds were far too numerous to count. Just off shore of Lisianski Island Bonin Island Petrels were very abundant around sunrise. All appeared to be moving slowly to the southwest and by one-half hour after sunrise relatively few birds were left in the area.

TABLE IX

SPECIES COMPOSITION AND DENSITY ALONG THE LEEWARD ISLANDS

Species	Number of birds	No. Per Linear Mile
Black-footed Albatross Wedge-tailed Shearwater Newell's Shearwater Pterodroma externa Juan Fernandez Petrel Mottled Petrel Pterodroma hypoleuca Bonin Island Petrel Black-winged Petrel Leach's Storm Petrel* Black Storm Petrel* Blue-faced Booby Brown Booby Red-footed Booby Great Frigatebird Golden Plover Sooty Tern Common Noddy Tern Hawaiian Noddy Tern Blue-Gray Noddy Tern** Fairy Tern	1 981+ 1 37 2*** 4 58 3*** 29*** 3 1 1 25 3- 1 24 414 101 146	0.004 3.48 0.004 0.13 0.01 0.01 0.01 0.01 0.004 0.004 0.004 0.09 0.01 0.004 0.09 1.47 0.36 0.004 0.16
Unidentified birds	88	0.31

^{*} Includes all white-rumped Storm Petrels

^{**} Identification uncertain

^{***} Included in above total

SHIP WEATHER OBSERVATION SHEET

									TABLE							0-0	
TIME		NDS ESTIMATED	VISI- BIL-	WEATHER	BAROMETER		RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	S
(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	340	15	10	BKN	30.00		70	Service Servic	1800	The sand	The statement	010	Lang.	Parasie	310		
01	350	24	10	PM	2971	E Com	71	5	1800	1. 1.4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	UEC	And the second	- Same	.320	7	and the same of th
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TABLE II SYNOPTIC OBSERVATIONS

		POSITION OF SHIP		SHIP			WII	ND		WEAT	HER	PRESSURE			С	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	OUR SSURE DENCY	SIC	GNIFIC	ANT (CLOUD
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
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REMARKS

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TO FERRI HERDE HARMEN

TABLE I

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TIME	TA / IF	NDS ESTIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees a			CLOUDS		SEA WATER TEMP.		SEA WAVES		S	SWELL WAVE	ES '
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14	115	25	8	BKN	29.98	78	13.5	6	1800	Cu	82	065	3	3	075	3	3
15	110	25	2	BKN	29.99	78	75	1	1800	Oller	83	05	3		03	8	C
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22	1 1 1	3	5	RKA	30.03	\$6.5		7	1500	CUI	75	115	of the state of th	of copye	075	Sorry .	E.
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			POSITION OF	F SHIP			WII	ND .		WEAT	HER	PRESSURE			С	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	HOUR ESSURE DENCY	\$10	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)	TIME (GMT)	}	Direction (True) (00-36)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0-9)	Height of Low Cloud	Type of C _M (0.9)	Type of C _H (0-9)	Ship	J of Ship	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _a L _a L _a	L. L. L.	GG	N	dd	ff	VV	ww	W	ppp	TT	N _h	CL	h	C _M	Сн	Ds	Vs	а	pp	8	N _s	С	h _s h _s
SHIP	2	1	257	718	00	1	03	11	99	03	1	183	24	3	2	Warran France	0	0	y	4	6	10	8	TV OF	36	18
SHIP	2	Carried and Carrie	245		06	St : It o serves	10	S. C. C.	48	O Salar		149	3.5	roa.	and a second	-\$	0	0	3	24	2	10	8	erre	San a	
SHIP	die	1	245	699	12	8	07	15	94	03	2	300	100 mg	2	7	in the second	0	E make	2	4	6	0-5	8		Robert F	14
SHIP	1	· Arrenge	242	676	18	5	09	15	13	- 6	2	159		5	2	Life	200 mg	e de la companya de l	3	4	0	C 2 march	8	8		13

	AID			SEA WA	AVES			SWELL	WAVES		l	CE AC	CCRETIO	N			SEA I	CE		
Indicator	AIR- SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	Н"	1	q~ q~	P _w	Н"	2	s	E _s E _s	R _s	ICE	C ₂	К	Di	r	е
0	01	19	1	07	1 Em	Christon.	1	53	2		2				ICE					
0	FL	18	1	108	200	100]	16	- R	3	2				ICE					
0	5 Lan	20	1	07	The same	hoa	1	ON	home	7	2				ICE					
0	54	20	1	67	2		1	. 3	2 -04	1.	2				ICE					

Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
25.8	21.6	378
°ų		
256		

USS_THURSONI ATF 114 DATE (GMT) THURSONY 25 OCT 19 66

AT/PASSAGE FROM LITY SAM BLAND TO SENAL HINE L'ON

TABLE

									IABLE								
TIME		NDS ESTIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees o	RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	ES
(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00 }																	
01	175	24	40	Township of	The of the	yes my	a simon	Eng.	1500	CU	The state of the s	1.65	3	and control	075	4	5
02	080	20	113	Bru	20 96	85	75	5	1 you	((53	065	and a second	2 - 10 mg	(J 3)	. /	Agricultura Agricultura
03	. /.)	- wind work	10	SEN	29.95	Service Control	The state of the s	4.	11/00	1111	and of the same	Secretary Secretary	and B	original statements	Contraction of the second	ring	2
04	090	22	plant.	BUN	19.96	22	: And the land to Market on the		1800	The state of the s	Comments of the second	165	10 de 1	Service	A STATE OF THE STA	To go	See See
05	095	Zet	10	BKN	29.98	34	74	Co	1800	CAL	83	065	3	3	015	hand	- The state of the
06	080	22	10	BKN	29.99	77.3	74	6	1800	Cu	83	065	2	and the second	075	4	6
07	030	17	8	BKN	79.79	77	7 61	6	1900	((/	1	of Canada	~	- 39 	godin de de la constitución de l	1	-1°
08 -	190	17		BKN	34.79	7/	74	1-	1.00	C 14	82	111.5		4	for soil.	6.1	e**
09	and the same	1 5	7." !	. 7 1	795	~ /	2.1	<i>C.</i>	1:00	17		A Property of	.e.	1	Shares Suda Mare	11	
10 *	080			Sp. C. J.	29,99	a de de	sarri any	3	1800	CU	52	160	a.	Ann g Refer And a	1170	21	5
11	73	j 5	har.	BKK	24,47	15	74	4	1360	1 / 1/	5 3	060	old of the state o	have	C70	4	die
12	(.75	13	8	SCT	24.96	78	74	Long	1360	CU	82	160	- March	advant.	070	Sound	Lafar
13	185	19	1	SCT	25 45	de la seconda	Bay with		1800	CIA	82	065	7	Alexander of the second of the	075	4	4
14	090	- C	8	500	2995	Sand of	case way	3	1900	Manufacture of the second	The state of	065	3	2	(346)	4	" And of
15	040	24	*	Set	2995	75	72	- Service of the serv	1800	CL	82	1276	est.	5	1233	1- god	No. Street
16	090	which the	7	5.7	29.95	The same of the sa	The Tree	Market of a	19 34	All Est	A STATE OF THE PARTY OF THE PAR	C. F. Line	5	the transport	Care & that	asia (in f
17	090	when had	4	507	2095	water	and of	S. Market and de la constant de la c	1700	Con care	X 2	() 25	104 m	1 m m m m m m m m m m m m m m m m m m m	Con Tom	and the second	4.1
18		- M	6440 14.2	Amy to the	_9,97	77	the state	of the state of th	1800	A. A. Marie	12	085	- The state of the	3	290	Engl	hand the same of t
19	069	12.5	8	Ser	29.99	10	13	6	1800		82	085		and a	090	4	4
20	038	13	8	SCT	29.99	81	74	Salar .	1300	ALL	82	085	STATE OF THE PARTY	Cip.	090	4	4
21	134	13	8	SUT	30.01	Meteory Control	74	E AMENT	1800	A Show	82	085	3	1	090	6	harpen
22	Supi	25 A 10 A 1	e per	2-7	109 4 9	27	74	Lugham	1500			September 1971	7	3. f	And the second		- Andrew
23	240	14	8	36.7	27.9 8	ž.	7 11	e salari Periodi	13	€. €.	J. Fran	211	. 7	· mon	1.22	harf	.5

	1		POSITION O	F SHIP			WII	ND		WEAT	HER	PRESSURE			С	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	IOUR SSURE DENCY	SIC	SNIFIC	CANT (CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Lotitude (Degrees and tenths)	Longitude (Degrees and tenths)	(GMT)	Total Cloud Amt. (Coded)	(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Post (0-9)	Borometer Corrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0-9)	÷ (-)	Type of C _M (0-9)	Type of C _H (0.9)	e of Ship	Speed of Ship (C	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Υ	Q	La La Lo	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ppp	TT	N _h	CL	h	CM	Сн	Ds	V _s	а	pр	8	N _s	С	h _s h _s
SHIP					00																		8		2-	1.4/4
SHIP	3	j [*]	234	660	06	ant small g	05	22	95	1.2		156	25	5	1	4	3 mm	1	32	5	2	14	8	5	8	18
SHIP	The state of the s	1	223	648	12	5	18	18	98	12	1	146	25	5	one.	4	1	6	2	fork,	7	10	8	A average	3	15
SHIP	3	and Section in	226	638	18	3	09	20	98	02	0	149	26	2	Stands of the stands	4	0	0	1	5	3	07	8	3	्री	18

	AIR-			SEA WA	AVES			SWELL V	VAVES		ŀ	CE AC	CRETIO	N)		SEA I	CE		
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicatõr [—]	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d _w d _w	P _w	Н"	1	d _w d _w	P _w	Н"	2	s	E _s E _s	R _s	ICE	C ₂	K	Di	r	е
0			1				1				2				ICE					
0	56	23	1	67	2	-7	1	03	2		2				ICE					
0	58	The showing	1	06	the second	. 2]	Day	NS.	. 3	2				ICE					
0	52	- 10 m	1	09	2	7	1	69	e de la companya de l	. 3	2				ICE					

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A	A ₂	A ₃
Celsius	Celsius	Celsius
25,3		The same
5 S V.	mi i i	77. 3
	4	

uss_TAWAKONI	ATE 114	_ DATE (GMT)	CCT 4 19 6C 31
AT/PASSAGE FROM		_ то	L.
	Т	ABLE I	

T	IME	WIN ☐ √ IF E	IDS STIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER	RATURE und tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		5	SWELL WAVE	S
((GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
C	00-	140	10	8	3.7	2996	- ag			1500	C ()	7.7	(5	4	4	090	deliner.	7
(01	001:		4		19.75	, in	g end no	r	1700		-	Bec.	· ·	1 States	-75	OF ACE	7
(02	145	497	and the second	S. T.	14 14	7 -	F A A	5	180	CU	5	030	<i>a</i> .	1-10-10 m	1.86	r on	Save s
	03	<i>C</i> <	\$	>,		34 6 4	A age	T.	e got de de de	; (° , , ,	Const List	1 00	E 5. 6		6,			internal control of the control of t
	04	1 40	16	X		24.94	7.1	to John	San S	A STANSON OF THE PARTY OF THE P		42	1 let	2	- Har	Search county when		5
(05		y year	: 2 	- State of		- 10 pt	7 6	P = m_	1881			111		and a	075	400 00 00 00 00 00 00 00 00 00 00 00 00	for b
Feet (06	1.55		A CONTRACTOR OF THE PARTY OF TH	5/	2995	80	75		1808	CU	The same	Et E.	ensister	an and	080	Serg.	al and
(07	070	ing in	Y	SOF	3000	30	75	- ward	المارية المارية	to had	J. Ban	cica	and a	Sand as	0140	5	
(08	080	e Co	8	012	Fled to an	80	7/	Colores and Service	The state of the s	AND THE PROPERTY OF THE PARTY O	82	060	oung oligi gale	Congress story	040	40	positivative B
(09	right by the state	The state			3 W. O France	77	and by	And the second	1/00	E. Wester	To how	072	3	Statement of the	500	**************************************	needs.
	10	242	14		5	30.00	14	72	2		au	The state of the s	050	T	A STATE OF THE PARTY OF THE PAR	11/15	alling to	ing
	11	11/8	14	1	EAT		79	The same		1800	Mills	83	050	and you have the second of the	design to	Chá	the same	1
14 19 0 14 19 0	12	MI	3.35th Rent State Way	T.	SOT	29.99	74	72	2	-ut-	M	,	050		3	068	Aystres *	
1	13	Dity:	14	1 5 m		29.97	79	71.5	of the second	18/1	111		(201)	and the same of th		075		on the second
	14	070	13	Provide the second		29.96	Secretary Company	715	~ f	1700	C. (A	part on	Tit. C	great !	APTIMES.	\$ 100 mg	£	e de la companya de l
	15	070				24.97	28		2		aso lead	1	. 8	and the second	~	073	***	5
2	16	1346	1 .		Ser from	24.47	7) 7.	71	-my	170		~ 4 ~	033		- Single	1111	grander.	5
	17	Marin Signer	go pour 3	-	201	30.60	77	71		1300		6	030	ename en	** ***	15:53	- Acom	
	18	090	10		The same			41	and a	1818	aleu		080	3	***	160	5	a
	19	(80)	10		50.7		4767	and the	.02-	1800		33	11/1	alle a	A Standard By		None process	and the second second
	20	175	111	5	SCT		91	7 %		1800	CU	The state of the s	11/19	4.4	Popular de la constitución de la	1	5	1
	21			, P	- Const		2-1			000	2000		15.					
	22																	
	23																	

			POSITION O	F SHIP			WII	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	IOUR SSURE DENCY	\$10	GNIFIC	ANT C	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Lotitude (Degrees and tenths)		TIME (GMT)	Total Cloud Amt. (Coded)	(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0.9)	Height of Low Cloud		Type of C _H (0.9)	of Ship	Speed of Ship (C	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L. L. L.	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	СН	Ds	٧s	а	рр	8	N _s	С	h _s h _s
SHIP	14	To special services	1 1 3 3 3 A	623	00	4	04	10	98	01	-	146	28		** Anna ***	4		party.	7	day.	7	17	8	inf	X	18
SHIP	14	***************************************	217	610	06	\$ 000 C	of a few second	15	A STATE OF THE PARTY OF THE PAR	gift gifty	The same of the sa	of the south		and the same of th	-	s.f.		Separation of the separation o	pares of a	5	est of the same	02	8	40-6	V	18
SHIP	4	No. of the last of	2/1	398	12	The same	04	14	99	02	1	156	26	1	2	2.1	0	4	Sales Services	S	6	10	8	2	1	
SHIP					18																		8			
				1																						

	AIR-			SEA WA	VES			SWELL \	WAVES		I	CE AC	CRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	dw dw	P _w	H _w	1	d,, d,,	P _w	H _w	2	s	E _s E _s	R _s	ICE	C ₂	К	D _i	r	е
0	116	~~ ~	1	105	7	2	1	09	are i	Life	2				ICE					
0	52	500 20]	06	2	interest	1	08	2	1	2				ICE					
0	31	2 %	1	03	2	23 C	1	173	J	(N)	2				ICE					
0			1				1				2				ICE					

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
27.8	23.4	
		~

USS AT/PASSAGE FROM PERAL HARbor HAUM TO 14° 28 N 164 418 W

										TABLE								
	TIME	WIN ☐ √ IF E	NDS STIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees o			CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	S
	(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
	00		.0	°,	13 F	a salar fil god		and the second of	8	1200	E 2. 3	84	114	4	5	of the book	e) .	, di
	01	095	A Second	per E.A	Blas	75 97	41	And the second			C 4	84	110	41	Second .	130	Marine 3	g g g g
0	02	117	175	10	BKN	29.35	10	one was	7	1300	Ch	1/3	1/3	- 3	2	S. Jan.	a distance	<i>i</i>
	03	06/	15	10	Set	29 86	80	72	hope	1800		84	080	En.	3	090	Z	1
	04	663	13.5	10	Ser	29.88	30	72	4	1800	Cu	84	080	4	3	080	Commercial	i
	05	083	16.2	10	BKN	29.89	79	72	6	1800	Cu	84	095	4	3	100	3	1
	06	176	14.5	10	BEN	29.90	79	72	6	1800	Cu	84	080	4	3	090	Z.	· ·
	07	175	11,0	A A A	117	39.911	1 3	and and	g! -	1500	e* 2, £	5 m. f.	A THE STATE OF THE	4. #	****	or since		į į
	08	, 11.	120	10	1	2	And the second	1.5		,	Kenny .	34		- /				
	09	-	: 1	10	3	24 7	- 7		*44.	.,	· ,	' f	-	/		C. C.	.'	/
	10	- 7	11	. 35	TKN	many of sign of	79	73		1360	the let	5 V	0 %	V.E		ř	4.6	Find BANGE AND LOS
	11	· E	10	5	BAN	29.41	79	73	1	1800	CUST	84	1. 75	4	and the second	195	india.	en la constantination de la constantination
	12	101	1		FKL	29,90	77	74	(kg.	1816	011	84	685	S.L.	2 chan	165	The said of	To all ways
	13	1.96	1 tong	S.	BKU	29.88	E.C.	74	and and a second	1860	CU	84	655	4	ing s	1. 6	,	Tables or
	14	105	20	5	ove	29.87	78	74	10	1745	a September	To had	015	in hour for	- Contract	160	material de la servició de la servic	theres.
	15	and the same	or ed	4 -	ove	1.5	79	and the state of	10	1800	And the same of th	44	090	4	Programo	100	3	Caresi-
	16 ,	110	13	8	E And	29.44	79	7	9	2 Startes	The state of the s	34	100	3	Carpenne	105	energy gill " "Me Gares"	and the proper
	17	109	14.9	2	BKN	29.89	79	74	9	1100	at/cu	84	119	3	6	125	fungage exchange	Consiste an
	18)	106	15	3	BKN	29.89	80	745	9	1800	ST/CU	34	116	-	A SALL SALL SALL SALL SALL SALL SALL SA	120		Emp
	19	1087	111	8	EKN	29.93	10	73	9	1800	ST/eu	84	118	Control of the Contro	Enro	A silver with	Const.	Comor
0	20	0825		10	BK	29.94	85	76	S. S	1800	CU	84	095	C)	Rose	090	3	Maring
	21	0812	10	10	BEN	29.92	85	775	6	1800	Ch	85	015	100 kg	Same -	090	San Saylor Company	No. of State
	22	1 45	17	3	6. 50		W	7		1. " "	S. E.	remote gain	1 th 1 th		2	er : 54)		->,
	23		1 6	St. 8		787	5.5	7 8	1	14.00	111	= 5	675	L	1	1.80	and the same of th	

								•	STROPT	IC OR2	LKYA	110113														
			POSITION O	F SHIP			WI	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0)	3-H PRES TENI	OUR SSURE DENCY	SIC	GNIFIC	ANT (CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees ond tenths)		Total Cloud Amt. (Coded	Direction (True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	0	Type of C _L (0-9)		Type of C _M (0-9)	Type of C _H (0-9)	e of Ship	J of Ship		Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	La La La	L ₀ L ₀ L ₀	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	Сн	Ds	Vs	а	рр	8	N _s	С	h _s h _s
SHIP	7	1	205	543	00	F.		14	· , .	1	Kraa.	1 .	21	6	1	4	0	1	3	In the same of the	Sandaria.		087	E of	0	1, 1
SHIP	7	1	196	mention of some boules	06	and amore	and advance	- Grafin	- ranger of some	and and and	shingshine sand	January S	SOL	Land and the same of the same	acomorphisms.	- A A	committee for the second	ensularitation	minor no.	to make	and and		POPUE BALSICI.	The second	man film	manufactured 1
SHIP	A STORY	ĝ	196	604	12	100	Mile Glassic.	09	98	02	10 mag	I will made	- C	1	No. of Contract of	Einf.	A. C.	Action of the state of the stat	Torne 3	and for	A Co	En Sie	8	Mark Comments	A. C.	17
SHIP	1	1	101	614	18	17		15	12	102	2	152	- Jan 1 - 1	6	1	To make the same	and a	April 1	5	5	1	OB	8	60	7	E 1

	AID			SEA WA	AVES			SWELL V	VAVES		10	CE AC	CCRETIO	N			SEA I	CE		
Indicator	AIR- SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d, d,	P _w	Н"	1	d,, d,,	P _w	Н"	2	s	E _s E _s	Rs	ICE	C ₂	К	Di	r	e
0		19	1	05	0	2	1	09	7		2				ICE					
0		21	none from	64	- Anna	Carlos Ca	- Carlanae	Latinia	- Same	a Miles	2				ICE					
0		En 1	1	69	me.	2	1	11	- y	APSAMIS.	2				ICE					
0	die har		1	12	2	Grand September 19	1	12	1	1	2				ICE					

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
26.1	- 2 2	25.9
26-4-	2242	minimum disease of a
ik 1	228	28.9
		2

USS TAWAKENI ATF 114 DATE (GMT) 9 OCTOBER 19 66

AT/PASSAGE FROM PEARLO HALBOR, HAWALL TO 14'28N 1680 48W

										TABLE I								
	TIME		NDS ESTIMATED	VISI- BIL- ITY	WEATHER			RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	SWELL WAVE	ES
	(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
1	00	193	13	11)	BKN	29.87	55	of the stay	1	2400	CU	55	The state of the s	2	1	080	3	change control of the
_	01	150	/3	10	BW	2984	85	Series Series	1.	2460	Cu	\$ E."	685		port	CHE	-	E
7	02	185	08'	10	BKA	29.53	35	And Barrier	C.	and the contract	CE	54	Part of the same o	So production,	proposition of	080	of the same	4
	03	6.45	07	pri gen	BKN	2983	5.5		gow.	236	CU	54	The same of the sa	in the water of	garty or and topar	085	Section of the sectio	hof
_	04	046	05	12	BW	29.83	85	A Sec	a ja	2000	cyci	The state of	State of the state	Will are an other party and the same of th	And the state of t	150	and the same of th	ef.
	05	0.52	08	10	BKU	29.84	84	75	6	2000	cu	84	A STATE OF THE STA	See to the second see the second see	The state of the s	080	Fair	e.f.
	06	026	225	8	SIT	5 88	31	24	4	1800	C (w)	84	and the second s	n de selection de la company d	areas access	080	5/	hop).
	07	077	09	4	Set	2990	81	maria S. "	4	A THE SEARCH	Rose Broke	44	St.	A STATE OF S	The state of the s	080	4	4
	08	071	09	8	50%	2991	entra de la companya del companya de la companya del companya de la companya de l	and the second	1.1	1900	he had	84	State of 15	William Company	M. Telegraph of the Control of the C	040	4	2000
	09	09/	13	4	SCF	2991	81	75	1	1 The lates	Enter Supple	84	And the same of th	P I STATE OF THE PERSON IS A	1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	045	in the	750000 3000 3000 3000 3000 3000 3000 300
	10	087.5	13	3	with the	3.90	31	STATE OF THE PARTY	4	1840	Part Care Market Land	84	and the state of t	and the second s	St I St	OBE	ein f	Marie Control
	11	011	12.5	· Million	6X37	24.49	81	700	4	1800	Cha	84	* \$	S. C. Marie Strategie Mark.	3 3	185	4	3
	12)	092.5	13	8	Ect.	5984	81	17 Ces	Section 19	1800	Cu	84	Q.85	2	a page of	0 25	4	-
	13	086.5	12.7	57	South the state of	19.87	81	76		1800	Cu	84	11	5 t	Anna Caraca Cara	090	4	Carper .
	14	0790	En English	5	Sc. 7	27.85	80.5	75.5	3	1800	Court I	83	- production	Proceedings of the second second second	Sand Market She are in the delice	1777	and a second	E.f.
	15	1.7-31	9.0	~		1976	16 T. S.	the general state of the state	en e	1900	of the state	to mi	Contraction of the Second of	10 got grand grand grand grand	and of the metalogical and a		E god	g de la companya del companya de la companya del companya de la co
	16	, "] .	1	7.7	and the second	The second second	. 1	Marin Comman	~	1200	811	1.	CONTRACTOR OF 3	See you where the sector of th	thereby the same and the same	160	er en	Royal .
	17	p 329 ji	9 6		e 7.	7. 87	State of	7 1.	acres?	15 7 83	e 6.4	E win	W. Jr.	and the second s	Mr. and Mr. and Mr. and	120	4	have god of
	18	183	4	16	2 mg/200	1 29	the state of the s	and side	100 to 10	180€	(1/4)	7	1 26		St. Market	135	4	neady.
	19	511		11	The second of th	2491	91	SO	and the second	1300	64	75	095		1	110	ma.	
	20	Jan Jan Jan	1	11	7	they they to the	6.20	John John	-3	1500	CU	5.5	Special Special	Mary and word	1			
	21	· 1 * * 5	6 7	\$ v _	ayes same	29,91	Sel	79	4	1860	111	5/5	· f	W 15	,	1-2	45	
	22		08	10	50	29.91	88	28	4.	1800	Cu	35	100	3	1	115		3
	23	1275	and the state of t	Acres 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sint Property	29 89	87	78	- Service of the serv	party of Collapse	C. Laterandon	ext 5	party of the said	Sure.	and .	John St.	-	and a second

	Day		POSITION O	F SHIP			WI	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0	3-I PRE TEN	HOUR ESSURE IDENCY	SI	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)		TIME (GMT)		Direction (True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0.9)	Height of Low Cloud	Type of C _M (0-9)	Type of C _H (0.9)	Ship	Speed of Ship (0-9)	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _a L _a L _a	L. L. L.	GG	N	44	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	СН	Ds	Vs	a	рр	8	N _s	С	h _s h _s
SHIP		and of the same	183	(26	00	Part of the second	the same	13	S. S.	And Care	es al	115	29	(Doc. o.	for the same	Sandy F.	200		4	day.	13	8		E	Tour State
SHIP	1	1	18.6	638	06	No. of the last of	08	08	98	01	1	119	17	A.	Lona	inf	0	Canada	Lange	d'y	strange	Sura Sun for	8	a j	8	13
SHIP	1	1	169	250	12	3	199	13	98	02	0	122	27	Por .	the state of the s	4	0	0	Mary of the state	5	3	13	8	7	8	H
SHIP	11	1	162	662	18	-	18	09	98	1,2	0	A Secretary	25	87 ° 3	and officer	4	C	1	5	St. Comments	Cole .	07	8	the said	Z	
							0	,	- C.F				1													

	AIR-			SEA WA	AVES	100		SWELL '	WAVES		1	CE AC	CCRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	Н"	1	q" q"	P _w	Н"	2	s	E _s E _s	R _s	ICE	C_2	K	Di	r	e
0	y fr	(714)	1	69	, Ang	C	1	and the same	aria .	5	2				ICE					
0	2 1	den have	1	0			1	04	Face-	100	2				ICE					
0		24	1	09	J:	-1	1 -	29	ef.	ther.	2				ICE					
0	(0	22	1	1.2	2	0	1	114	1	3	2				ICE					
								,												

Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
29.4	are the time	25.4
21-2	239	
27.4	25 6	

USS TAWAKON ATF 114 DATE (GMT) 10 05 FOBER 19 66

AT/PASSAGE FROM PEAK HARbor, HAWA TO 14" 28" N 168" 48" W

										IABLE								
	TIME		NDS STIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees a			CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	S
	(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
1	00	094	7	, d' E)	BKA	29.87	78	79	9	1800	Cut	85	095	2	1	110	5	2
61	01	101	9	10	Eta	29 85	88	25	9	18/00	CUL	85	095	7	· Ideans	110	and the second	Z
	02	110	7.5	10	and the same of th	29.84	85	19	9	1800	Cill	15	090	En.	1	100	Managar.	Constant Con
	03	11.1	7.5	10	3/11	1.55	77	76	1	1808	टेर	3 3	7:.	-ut	1	/		rt,
	04	118	1,5	100	PAR'S	21.55	emil of	FC.	De.	1500	The state of the s	7.5	200	-general	1	180	and the second	The Add
	05	75	86	1 %	OVO	29.37		in product	10	1000	And the second	\$** 1" *** \$\frac{1}{2} \tag{2}	Section of the second		1	196	h a q) - Pro
1	06	1043	8.5	8	DIC	29.88	73	and gods	10	- King	1/20	The same	080	Lane	1	090	3	2
	07	086.5	-8	8	BKN	29.90	83	フフ	7	1800	Slev	85	080	2	1	090	3	~~
	08	066	11	3	BKN	29.91	83	77	6	1800	55/60	86	080	France	1	090		- American
	09	127	11	3		2992	83	77	10	500	57	86	080	2	1	090	3	2
	10	i .	10	\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.	Separate Sep	4 91	15	72	10	1.1	34		1.14	1_	di di	691		
	11	1	17	?	R	29.96	Come and	26	18	500	3/64	86	1.00	2	1	1115	diet was Swelf on Alexander	2
- 1	12	1 2/	11		1	19.90	76	John Son	10	500	50/00		110	Carrente	1	105	The same of	- Mary Santon
	13	125	17	5	BKN		78	76	8	1500	50	86	090	and the same	1	11.5	they are	Management of the second
1	14	(42	J.	of the state	BKN	29.81	80	77	7	1800	SC	86	010	7	1	085	-	Con-
	15	10%	6.5		BICN	29.80	81	77	8	1800	500	86	090	Z	ji di	01/5	Andre Comment	Entrace Contract
	16	127	8	7	BKN	49.79	11	18	8	1800	Sc	86	110	Langua .	1	115	3	Comment
	17	172	5	8	Cimi	39.80	81,5	235	8	1200	Sc	The state of the s	A pi cong	-consider	d	of it was	and any	- or order
	18	18/	esperal.	A CONTRACTOR OF THE PARTY OF TH	10/13/2/	29.21	71,5	and Same	Sec.	181 6	· Comment	860	115	». «	1	115	7	Z
	19	170	april 1	Arm's	CAR	29. 82	81.	25.5	A.	1888	25 6	86	110	- was	1	by or band		W. C. Sanga
	20	1,0	5	8	R	24.35.	71. 5	275	5.7	1 7 7 7	326	310	110	- 0 *50 day	,,,	110	and the	drop and a second
	21	116	9	8	BHI	14, 85	56	79	6	1-7-	Leis	86	130	and the same of th	seems we	1-10	- market	5
	22	118	10	8	BKN		86	70	6		14/50	56	135		2	146	3	7.
	23	115	10	10	XT	29.86	86	79	4	1800	C4/5C	186	121	and,	1	150	also had	Morral Maria

			POSITION OF	F SHIP			WI	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	HOUR SSURE DENCY	\$10	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	Oc- tont (0-3) (5-8)	Latitude (Degrees and tenths)		TIME (GMT)		(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Post (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	0	Type of C _L (0-9)	Height of Low Cloud		Type of C _H (0.9)	e of Ship	Speed of Ship (0	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	La La La	L _o L _o L _o	GG	N	qq	ff	VV	ww	W	ррр	тт	N _h	CL	h	CM	СН	Ds	V _s	a	рр	8	N _s	С	h _s h _s
SHIP	2	1	15-11	623	00	7	09	07	98	03	1	115	31	5	1	4	4	0	5	5	6	14	8	7	8	18
SHIP	Surveyo.	a de la constantina della cons	147	1.44	06	8	10	09	74	02	and and	119	28	4	3	4	0	0	A. Contraction of the contractio	Reg .	and the second	10	8	8	5	15
SHIP	and and	The same	139	1.94	12	8	13	- ADMINISTRATION OF THE PARTY O	97	43	2	125	24	8	1	16	(0	5	4	4	00	8	8	8	04
SHIP	2	1	130	703	18	8	18	05	98	CUP	2	043	27	8	4	English.	Series Series	in the second	5	in f	2	07	8	2	6	and C

	AID			SEA WA	AVES			SWELL	WAVES		1	CE AC	CCRETIO	N			SEA I	ICE			
Indicator	AIR- SEA DIFF. (C∞ded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry (Deg and t
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	Н"	1	d,, d,,	P _w	Н"	2	s	E _s E _s	R _s	ICE	C ₂	К	Di	r	е	Се
0	02	24	1	10	2	1	1	11	2	1	2				ICE						
0	3/	24	1	0 %	2	j	1	The same of the sa	2	1	2				ICE						
0	7	23	1	16	2		1	11		3	2				ICE						
0	60	23	1	11	7	0	1	12	70	1	2				ICE						24

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
24,4	July C	

SHIP WEATHER OBSERVATION SHEET

USS TAWAKUNI ATFILY

DATE (GMT) // DETOBLE 19 6

AT/PASSAGE FROM PEAR U HAPPER HAWALL TO 1/2 25' U 168 48' U

TABLE I

										IABLE I								
	TIME	WIN □ ✓ IF E	DS STIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees o	RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	S
	(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
1	(00)	15	* T Comment	\$ 2 ×		2950	87	174	5.4		UNSC	26	A AND SANCE TO SANCE	3	. 480	150	4	
	01	112	9	10	507	29.80	57	19	4/	1900	U4/50	56	165		*	150	4	garabe
1 10	02	0684	5	10	BKN	29.80	87	29	6	1800	Cu	36	105	2	/	145	3	.3
	03	0655	4	10	BAN	29 81	86.5	79	6	1800	66	86	130	3	2	160	Laur	2
19	04	0655	4	10	Bkn	29.91	365	29	6	1800	Cu	86	130	3	Language	160	Zen -	2
	05	0575	7.5	10	BK	2983	84	78	6	1800	CU	80	150	.5	Corn.	160	Co.	
20	(06)	(0		£ 2,000 6	Mark N	9.84	84	75	de la companya della	1700	et land	6	170	enter enter	16 - Marie	garage gran Ci	and the same	hospins
	07	265	5.5	10	BKN	29.86	84	78	6	1800	CU	06	130	3	2	160	2	
	08	253	12	10	BICN	29.88	80.5	76	6	1800	Cu	86	UNC	tet	RUE)		
	09	255	12	10	BEN	29.90	80.5	76	6	1800	Cu	86	UN	OBSE	RUE	0 —		
	10	260	13	10	BKN	29.89	81	77	6	1800	Cu	86	090	2	2	895	3	4
	11	14/2	12	10	BKN	29.88	28	78	6	1800	CIR	86	090	Z	2	045	3	2
0	(12)	116	4	2	BKA	e long	82	77	8	1800	Cu	86	685	2	2	090	3	1
	13	103		No.	Brij	29.88		77	1	1800		86	070	2	E.	075	3	· wy
271	14	116	75	V	BKN	29.83	81	1 kg	4)	1800		86	013	7	C	080		7
	15	14 1	and the state of t	1	BKU	29.81	* Same	77			64		075	of the same		A STATE OF THE STA	of the second	e en e
-	16	15 %	14	8	PKO	953	81	77	1	1800	Cu	56	095	2	1	110	-	Description of the second
	17	095.5		10	BKA			フラ	0	1404	, ra		095	2	/	114	3	7_
1-77	(18)	095	12	10	Str			77	6	140	A Sec. of	36	095	Lon	1	110	3	Karauma.
	19	ff L.	" L	10	BIA	29 55	7.	79	6	1300		36	025	Separate Control of the Control of t	Leon .	110	3	2
124	20	1.55			 	29 69	45	28		The second second				#en(\$12)	- Same	11 (1		Service Control of the Control of th
	21	122	2		A ST. W.		-	7-7	6	Book Book Book		86	095	the exposure	į	110	1500 16.3	- Common of the
	22	(00)	2	10	BKA	24.87	34	77	6	1804	24/01		090	7	1	100	3	2
	23	344	7	11	SKN	29.36	16	10	3	1800	Ah	10	090	6	/	100	C)F	The Property of

TABLE II SYNOPTIC OBSERVATIONS

			POSITION OF	F SHIP			WI	ND		WEAT	HER	PRESSURE			С	LOUD	S		(6-0)	(6-0)	3-H PRE TENI	IOUR SSURE DENCY	SIC	GNIFIC	ANT (CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	Direction (True) (00-36)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0-9)	Height of Low Cloud	Type of C _M (0-9)	Type of C _H (0.9)	e of Ship	Speed of Ship (C	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	La La La	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	C ^L	h	C _M	Сн	D _s	Vs	a	рр	8	N _s	С	h _s h _s
SHIP	and any	op Brok Ages			00	100	1 4	1 25 25 25 2	98	11	2	11.5	a form	A Control of the Cont	8	4		0	5	4	-	14	8	5	8	18
SHIP	3	į			06	5	276	Ĉ	98	06	7	105	28	5		Contract of the second			Blood of the state		of the state of th	14	8	ANGE.	2 2	150
SHIP	3	1	132	713	12	6	12	09	98	02	2	115	28	6	1	4	0	0	1	4	7	07	8	6	8	04
SHIP	3	1	139	705	18	5	10	1 7	94	Section 19 Section 200	L	112			L.	4	1	0		4	Las	17	8	4	8	18
			-																							

	AIR-			SEA WA	VES			SWELL V	WAVES		Į(CE AC	CRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	Н"	1	d,, d,,	P _w	H _w	2	s	E _s E _s	R _s	ICE	C ₂	K	D;	r	е
0	52	24	1	with a Pro-	were a series of	and Waller Springer	1	atomics of	2		2				ICE					
0	5.2	4	1	1 3		j	7 /	5	-		2				ICE					
0	54	24	1	09	2	1	1	09	2	1	2				ICE					
0	53	24	1	10	1	1	1	11	1	1	2				ICE					

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
16	2 1	The second

REMARKS

EXAMINED

USS TAWARON (ATT-114)

AT/PASSAGE FROM PEARL HARBOIR HAWAII TO 14" 28"N - 168" 48" N

TABLE I

TIME (GMT) Direction Force (Knats) Price (Kn	(Seconds)	Height (Feet)
Direction (True) Force (Knats) (Miles) Office (Knats) Office (Kn	(Seconds)	(Feet)
01 094 6 10 BKN 29.81 90 79 6 1800 CU 86 070 Z 1 085		Torr.
177 2 10 50 20 10 10 10 10 10 10 10 10 10 10 10 10 10		11
02 150 2 11 PM 27.74 115 74 1 150 16 40 2 1 14E		4
	Augher	
03 050 3 10 BM 1-0 91.5 225 6 00 66 040 0 1 145		4
04 130 10 14 19.50 70 70 70 10 10 10 10 10 10 10 10 10 10 10 10 10	*. + ** Pt.	4
05 216 5.5 10 BKN 29.82 84 76 6 1800 Car 86 1/1 2/1/1/135	7	4
06) 219 5 10 BKN 29.84 84 76 6 1800 1/2 86 1/2 1/2 1/2 1/40	The state of the s	4
07 239 6 10 BKN 29.85 83 76 6 1800 CU 86 1/2 1/2 1/2 1/2	Phos mark	English Comments
08 746 7 16 505 -9.87 83 76 5 1500 04 86 1/2 1/2 1/30	**************************************	COLA COLO
09 137 6 10 SCT 29.87 82 76 5 1800 CU 86 "/" "/4 135	The same of	Second Second
10 080 7.5 10 Set 29 88 82 76 4 1900 CO 86 70 70 70 100	All Dans	4
" 074 11 10 Set 29.96 82 76 4 1800 00 86 7. 2 2-140	and and	<u>-</u>
12) 074 11 10 Set 29 84 82 76 4 1800 CU 86 7. 7, 7, 140	2 2	Z
13 074 11 10 Set 29 41 81.5 75.5 4 1800 Cu 86 / 1/1 / 100	loon 3	La par
14 115 7 10 Set 29.79 11.5 16.5 4 1800 Cu 86 1.5 1.40	har har	Constant .
15 076 75 10 Set 29.78 81.5 17 / 1800 Cu 86 11 11. 110		The same
16 076 7.5 10 SCT 2978 81.5 16 4 1800 Cu 86 - 10 10	<u>C</u>	Free.
17 093 10 10 BKN 29.80 DZ 77 8 1800 Cu 86 :: 110	En :	Emer.
18 VOS 12 11 BKN 39.81 840 78 5 1800 9/4 86 110 1 1 170	and the	4
19 125 12 12 WW 7.54 35 30 9 180 5/ 30 110 1 1 120	-	1
20 265 10 10 PKN 29.86 885 79 8 1300 96, 186 110 1 1 170	- Carlotte grow of	Conglet
21 7.65 12 10 OKN 9.86 59.0 79 7 1800 76, 86 110 1 1 175		4
22 119 11 8 8KN 29.84 87 79 8 1566 100 86 141 3 1 120	17021	The same
23/39 9 8 BKN 27.82 87 79 8 1860 CY 86 130 3 1 126	3	

			POSITION O	F SHIP			WI	ND		WEAT	HER	PRESSURE			C	CLOUD	S		(6-0)	(6-0)	3- PRI TEN	HOUR ESSURE IDENCY	SI	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Lotitude (Degrees and tenths)	Longitude (Degrees and tenths)	TIME (GMT)		(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Carrected (Mb)	AIR TEMP. (°C)	1 0 0	Type of C _L (0.9)	0 0	90	Type of C _H (0.9)	e of Ship	Speed of Ship (0	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _o L _o L _o	لی لی لی	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	СН	Ds	Vs	a	pp	8	N _s	С	h _s h _s
SHIP	4	1	147	698	00	- Service of the serv	29	03	48	01	Santa	102	31	5		2	0	0	-Amelina	4	6	14	8	6	Y	14
SHIP	4	1	154	199	06	6	25	05	78	02	2	105	28	6	2	4	0	1./1	7	The same	2	14	8	6	8	15
SHIP	4	1	159	207	12	3	07	11	99	0%	2	105	28	End	des	4	0	0	5	A. Marine	7	10	8	200	8	18
SHIP	4	1	14.1	716	18	6	//	12	98	07	1	095	27	6	2	Long	0	1	5	4	2	10	8	6	8	
										78.																

	AIR-			SEA W	AVES			SWELL	WAVES		1	ICE A	CCRETIO	N			SEA	CE				DO NOT TRANSMIT	
Indicator	SEA DIFF. (Coded)	POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	A ₁	A ₂	A ₃
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	Н"	1	d~ d~	Pw	Н"	2	s	E _s E _s	R _s	ICE	C ₂	К	Di	r	е	Celsius	Celsius	Celsius
0	01	24	1	09	ang line	- Camping	1	10	2	tine ay,	2	7			ICE						polaring market grantest	First for	200
0	1	The same	1	60	11/1	1	1	1 Enf.	aduras.	3	2				ICE						28.4	24.4	30.0
Soci		23	1	00	2	0	1	14	to pro-	100	2				ICE								
0	52	24	1	11	and a	0	1	17	2	5	2				ICE						ot in		

SHIP WEATHER OBSERVATION SHEET

USS_TAWAKUNI A-TFII4	DATE (GMT) THURSDAY 13 (CT 19 66
AT/PASSAGE FROM PEARL HARBOR, HAWAII	ТО
	TABLE I

									IABLE								
TIM	□ J/IF	NDS ESTIMATED	VISI- BIL-	WEATHER	BAROMETER	TEMPER (Degrees o			CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	ES
(GM	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	165	15	5	R	29.81	53	76	8	1500		. 2(180	£.f.	2	150	and a second	40
01	111	3	10	BKU	79,77	85	77	3	1860	CU	56	130	1	1	110	and T	
02	110	3	10	Blu	29.78	88	80	5	1800	Pho	86	150	3	1	110	Lane	<
03	1388	68	11/2	SIT	74 75	38	78.5	of the same	1800	CUAC	10	30	and a	1	075	haran .	/
04	125.3	6	10	SCT	2977	11.5	18.8	3	1800	MAC	86	060	Service Control of the Control of th	1	065	E.	es e
05	133	7	10	र्दा	29.79	85	17.5	3	1800	CY/AC	86	065		1	070	2	1
06	1/33	7	10	ST	29.79	88	78	3	1800	Cu	86	065	3	1	070	Zono	1
07	0	7	15	Ser	29.81	80	75	R. S.	1200	CU	26	OK.S	and the same	/	12	K.	1
08	· See See	1	10	50	29, 84	50	76	5	1700	CU	36	080	out of	1	090	Jan.	1
09	3 7.7	11	10		39.84	79	74	4	day the board of	CU	to the same	040		p.	Contract of	** gr	in the second
10,	133	8	8	527	29.84	79	76	5	1866	CU	86	110	**	A P a see	120	and a	K.
11	141	8	7	Carrell of Medicari Management of Medicari	24.83	78	74	and the second	FISEC.	CU	86	110	***	1	120	5b	Ž.
12	1153	, , , , , , , , , , , , , , , , , , ,	3	The state of	2450	75	75	And a second	111		56	1 1	3	1	110	Many	Zaver
13		of the same of the	8	SCT	29.76	79	77	3	1400	57	76	1.90	2	1	120	3	diagno.
14	142	7	8.	Sept	2976	70	22	Manager .	1300	Contract Contract	86	070	2	1	120	Zem	2
15	142	7	5/	St. f	2975	86	76	huf	15/110	En. Carl	86	090	Land	Z	120	2	and the second
16	1//	1/	8	Set	29.75	81.5	76.5	- 4	18/00	40-*	46	090	2	1	120	2	2
17	111	11	8	BKV	29.76	5/0	26	. 6	Bon	Stelle	76	050	the same	1	120	war of the same of	1
18	303	3	8	BKN	29.79	80	76	8	1800	Cu	86	050	Z	1	070	Paris de la constante de la co	1
19	340	13	6	BKN	24.83	825		9,	1300	(A)	-84	025	3	C	040	3	3
20	340	6	8.	BKN	129084	801	76	THE	1800		16	The state of the s	Commence & Commence	A CHANGE OF THE PARTY OF THE PA	095	of suffer to	Cour
21	1128	13.5	15	BEN	29.14	60	77		1 100	chie	16	S. S	· · · · · · · · · · · · · · · · · · ·	S. &	110	3	The same of the sa
22	190	5	10	24/11	9,53	5.2	77	60	A Comment				A Secondary of the	F. S.	670	7	4
23	330	5	10	BKN	2983	85	788	60.	1860	E SAC	86	11	Same and the same of	J. B. S.	080		4

	0		POSITION OF	F SHIP -			WI	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(0-6)	3-H PRE TEN	IOUR SSURE DENCY	SIC	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	Oay of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	Direction (True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	1 to 0	Type of C _L (0.9)	Reight of Low Cloud	of	Type of C _H (0.9)	e of Ship	Speed of Ship (C		Amount of Charge (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _a L _a L _a	L ₀ L ₀ L ₀	GG	N	dd	ff	VV	ww	W	ppp	тт	N _h	CL	h	См	СН	Ds	V _s	a	pp	8	N _s	С	h _s h _s
SHIP		-400 th 200 Circ	1 - 2	134	00	8	17	15	98	02	2	C95	and the	8	2	4	0	0	5	4	47	di solita	8	8	X	18
SHIP	5	- Carried State of the Carried	142	729	06	4	13	07	98	02		088	31	4	2	4	0	0	Alderes Aller	4	All I	14	8	3	8	04
SHIP	1	de-family.	148	721	12	3	THE CO. L.	06	98	A STATE OF THE STA	1	195	and the	1	6	4	E)	grad.	Chief Storage on	4	6	11	8	3	9	Î
SHIP	5	1	of the same as	712	18	6	30	05	92	03	j	088	27	1 007	7	4	1)	1)	- Service -	4		14.	8	3	0	94

	AIR-			SEA WA	AVES			SWELL	WAVES		I	CE AC	CRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	q~ q~	P _w	Н"	1	d,, d,,	P _w	Н"	2	s	E _s E _s	R _s	ICE	C ₂	К	Di	r	e
0	54	33	1	18	2	1	1	15	7	2	2				ICE					
0	02	24	1	07	2	1	1	17	2	2 mm 3	2				ICE					
0	14	22	1	11	7	a) alloways.	1	11	Ž.	2	2		,		ICE					
0	56	24	1	05	2		1	07	The second	1	2				ICE					

Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
25,3	24.4	30,0
25. E		361

SHIP WEATHER OBSERVATION SHEET

USS THUSHROWS DEFENDED TO DATE (GMT) FRIDING 14 OCT 19 66

AT/PASSAGE FROM PEARL MARKECE MENUALS TO

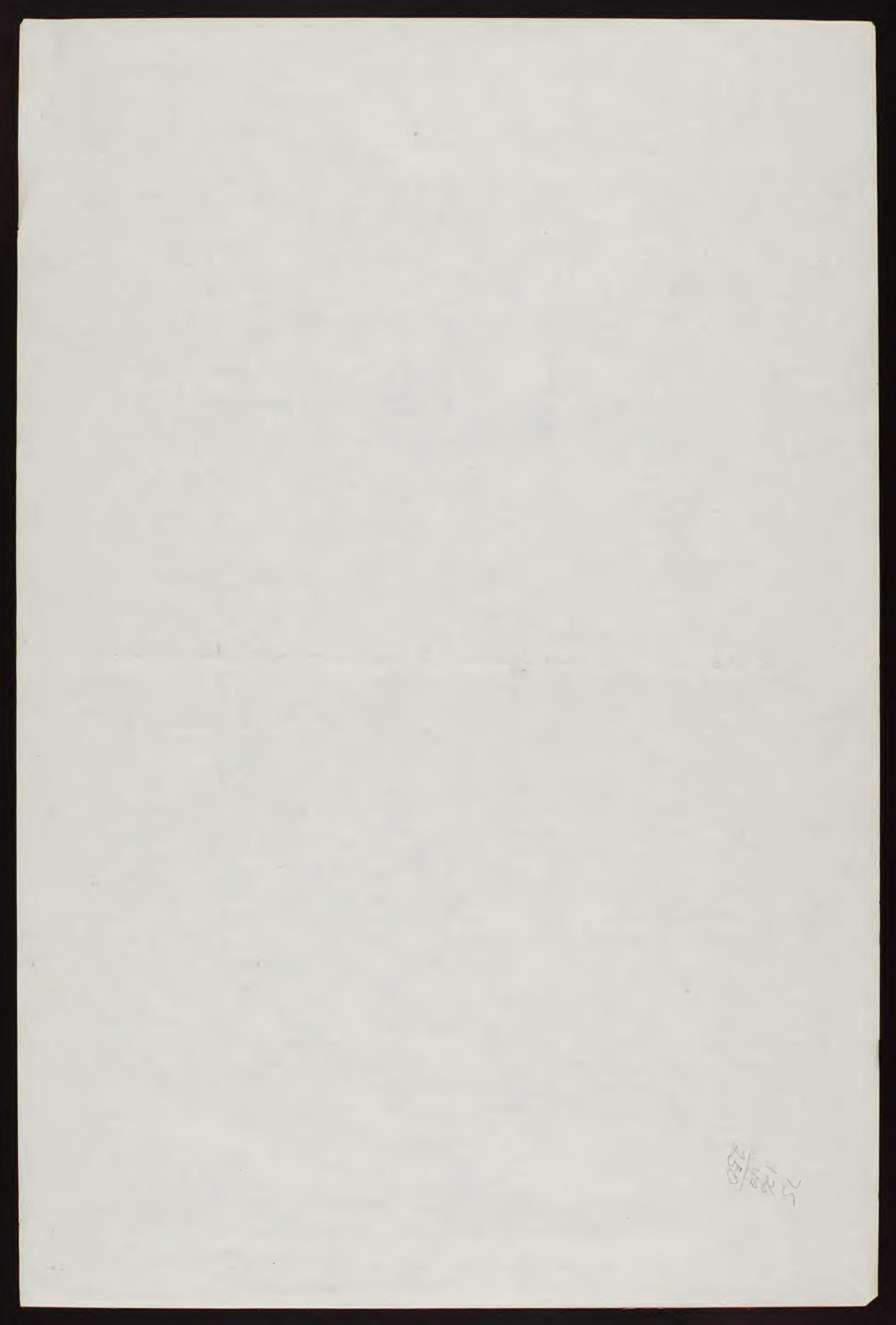
TABLE

-					1	T	1											
	TIME	WIN □ √ IF E	NDS ESTIMATED	VISI- BIL-	WEATHER			RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	WELL WAVE	S
	(GMT)	Direction (True)	Force (Knats)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Directian (True)	Period (Secands)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
1	00	293	6	15	EKA	29 80	82	77	3	1.700	Ca	56	1//	16 1	1/11	1.90	3	idijas
1	01	The State of	6	10	MAN	24. 3:		4	* ·	1	in the	and the same	State of the state	and the second of the second	Grande C	17957	const.	republic
6	02	275	4	16	F. E. A.	15	T	, 3 d	7	1500	culci	Andre of the second	as of a	The state of the s	"	055	43.55 au	- Cir
1	03	` ;	7	10	KIN	19.75	: 5	75	7	1000	cufer	56	ph in	James .	1/1	grand Till 1		e more
	04	26	4	17	PKI.	24.76	of Asian	78	4	1966	i'd	86	Sec	" fa	11.	(5	-	3
	05	-12	5	16	080	29.78	7 00		6	The Contract of the Contract o	14/37	81	4/2	1 state	of the	110	oddloon dig Progra	
	06	101	5.5	4	501	29.80	85	76	4	1400	00	86	1/1	to the .	1/1	166	3	3
	07	11.5	- 1 Alexander	(:		- 9,73	, =	7	** †	J.1.	£'	1. 5		1.	,	. / .		2
4	08	281	75	Li	Se F	IG. 43	41	76	2j .	18/20	En bound	76	1.	Martine Contraction of the Contr	Secretary of the	16 2	erastid	Comment of the second
	09	09/	7.5	6	Sef	25.83	81	76	4	1900	(~	86	1.	1.	and the second	N.C. Cad	Ĕ	Emeson.
	10	115	8.5	i de la companya de l	Set	29.83	81.5	77	5	1800	Car	86	Market Company of S	The state of the s	A Sandard Contract of S	The second secon	- Mary department of the State	The state of the s
	11	065	Anna Sant	6	507	29.84	21	76	and	1800	and.	86		- Commission of the Commission	The state of the	The state of the s		Parameter (
-	12	068	The same of the sa	6	SCT	29.83	21	76	5	1800	Ca	86	11	- A STATE OF	STATE OF STA	160		Sandy Sandy
	13	072.5	11.5	6	SET	29.80	81	76.5	Second Second	1800	Ca	86	and the state of t	The second of the second	Character Control of the	- Marine Salar	F. J.	i (
	14	0860	Egs.	6	SET	29.79	31	7.5	4	1800	C. Ch.	86	All the state of t	State of 1	A de la company	()	Alaka da karanan	Service of the servic
	15	091	8	1.	207	19.78	805	77.0	4	1500	Con	E.	Samuel Marie	Phi	orent orange and ye	Manuscrape Serve	The state of the s	and a
	16	7540	Constant .	6	RW	777	7.75	77	1/	1-1	1,1	1, 1	to a second	To the state of th	The same of the sa	Jr. John	ne ore systems.	
	17	114	17		RV	3.9.78	80	77	6	1500	CWST	in Comment	130	3	and the second		*3	and the second
	18	119	9	10	SCT	29.81	51	78	14.	1800	and over	90	125	The state of the s	1	160	As College,	
	19	1 7	10	11	EM	27.52	4	78	an A	1160	37/04	36	175	61 m	1	A fat	10000 1700 20 7	7
	20	106	4	16	1. 1. 1.	79.53	57	78	7	1810	57/48	86	146	3	1	14	, and a	potential of the second
	21	101	* }	1.5	ing he has	7955	In the state of th	79	3,	1510	14/27	the state of the s	, con	**************************************	e in	1 3 6	, ,	est of
	22	d : Em		10	A.A.	25.54	88	79		1500	Cyst	86	135	3	1	155	Z	2
	23	10%	6	10	BAN	20,81	8/7	29	8	1300	0 1/57	1516	3 5	2	1	150	de same	Commercial

			POSITION O	F SHIP			WI	ND		WEAT	HER	PRESSURE			C	CLOUD)S		(6-0)	(6-0)	3-I PRE TEN	HOUR ESSURE IDENCY	SI	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Langitude (Degrees and tenths)	TIME (GMT)		Direction (True)	Speed (True) (Knats)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Borameter Carrected (Mb)	AIR TEMP. (°C)	Amount of Low Cloud	Type of C _L (0.9)	Height of Low Cloud	of	Type of C _H (0.9)	e of Ship	Speed of Ship (0	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _a L _a L _a	L _o L _a L _o	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	СН	Ds	V _s	а	рр	8	N _s	С	h _s h _s
SHIP	6	Dabine.	16.2	70.7	00	6	29	06	98	15	2	0.91	27	8	2	life	Part I	0	19864	14	7	14	8	6	8	18
SHIP	6	1	164	715	06	3	40	05	91	01.	1	091	28	3	and the same	4	0	0	5	4	- Long	17	8	4	4	18
SHIP	6	1	152	722	12	4	07	05	97	02	0	102	27	4	1	1/	0	0	5	4	5	03	8	5	C.Am	04
SHIP	K	1	151	721	18	The state of the s		19	15	of the	/	195		1 ,	7 4	1	1	00	g	-	2	17	8	1	Auc	
							,				,	7	;				,	0.	, A.				-		1	E. C.

	AIR-			SEA WA	AVES			SWELL	WAVES		1	CE AC	CRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	q~ q~	P _w	H _w	1	dw dw	P _w	Н	2	Is	E _s E _s	R _s	ICE	C ₂	К	Di	r	е
0	4	24	1	00	0	0	1	04		2	2				ICE					
0	52	24	1	00	A. Samo		1	16	Line	2	2				ICE					
0	To La	21	1	00	7	0	1	16	2	E	2				ICE					
0	1	5	1 design	-7	2	,	1	11	2	7	2				ICE					

	DO NOT TRANSMIT	-
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp, (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
The state of the s	15 6	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1



USS TAWAKON: ATTIME DATE (GMT) 15 OCHOBER 19 66

AT/PASSAGE FROM REAR HALLES 10

TABLE I

							- 4		IABLE								
TIME		NDS ESTIMATED	DIL-	WEATHER	BAROMETER		RATURE and tenths)		CLOUDS		SEA WATER TEMP.		SEA WAVES		S	SWELL WAVE	ES
(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)	(Inches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	109	75	10	BKn	29.90	89	78	6	1500	Cyloc	86	155	1		105	Č.	1
01	100	The state of the s	10	Bet	29.79	88	78	6	AND SOUTH	()		155	1	and the second second	135	source The sec	&
02	076	5.5	10	BKN	29.77	88.5	78.5	7	1800	Cu	86	160	p ^d	1	165	2	p
03	050.5	6	10	BAN	25, 22	89	78	70	P. Species	i t co	80	160	1	1	f but it	and distribution of the state o	1
04	111	.3	10	BKN	29.77	89	79	6	1800	Windy	86	160	No.	*	185	1	**
05	125	1.5	10	esant.	2977	15	78	4	1300	chac	86	115	2	Lower	120		1
06	156	10	10	Ser	2978	83	77	Single State of the State of th	1800	Cu	86	200	Ser Service Se	See Anna Control	210	Colone .	· Por
07	112	11	3	10 mg	119 51	S. Jan	7.7	Accounty to	1866	CU	76	A Section of	and the	1 1	The state of	Angel Street	Pin Mi
08	1 - 2	16	8	The second	29.82	84	Error &	the second	1800	. (4	M. C.	1450	1 200	•	and the state of t	t was mile	- Special Sections
09	096	6	8	The one	29.84	7 3.	76		1800		54.	110	and and	1	157	70 m	Ser.
10	100	015	•	2 1	123	L. Also rate Drug Capity and	Road Comment	sa ⁿ⁻	17.66	for file	e arra	1		é	per a s	^g**	and the second
11	fil.	4.5	4.00 y	000	7 . 5	9,2	Louis Agrices of	· marrow di	1500	, e.	21 1'=	1 1	enersity b	65.0	1500	gar.	- 0.0 - 1
12	A Carla	7	30 - S	RU		, re	water of		1 Corn	the Car	The Man	14	and a	1	13/	and the second	general in
13	11 63		1	BKN		1.5	.'	,	1	11.	The	089	to the same	1	117	tilly directed as a last of the last of th	chammer grade Con grade and survive
14	093.5	103	5	pur y y	2581	80	76	6	1800		56			1	105	5	2
15	053	1.10.3	8	- 1	25.80	80	25.5	- 6	1500	CC	.86	C 34)	ar a _{nd}	105	- 5	2_
16	124	10	8	Ex	129.80	71	22	6	1800	12/2	861	085	- Second	1	095	3	- Carriery
17	1255	7	3	BEn	29.82	81	76	7		che;	86	Can 7 5	est etg.	ş	Co the	and and	estary.
18	116	9	10	BKIJ	29.83	82	77	, 8	1800	Ca	86	090	color-	1	100	ton's from . O'year of . G	1
19	125	7	10	BK		83	76	8	1800	cyle	86	090	2	1	100	43.43	1
20	145			BKN	29.87	83.5		8	1800	cuper	86	040	الله الله	1	100		THE PARTY OF THE P
2 Ker 300	7 9.	5 10	BKI	-	29.88	84	283	3/825	1400	enfer	86	090		1	100	All Areas	1
22	115	7	10	JUIN.			and some	24 2 44 AV	1700	Charley 1			,	Sep.	08	and and	3123-0
23	t to par	7	10	MA	godes	35. :	orași s				- 4	20 . 20 P		./	11/1		4

	Day		POSITION O	F SHIP			11W	ND		WEAT	HER	PRESSURE			(CLOUD	S		(6-0)	(6-0)	3- PRE TEN	HOUR ESSURE IDENCY	SI	GNIFIC	CANT	CLOUD
FIRST GROUP OF MESSAGE	of Week (1-7) (GMT)	Oc- tant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Past (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)		Type of C _L (0.9)	Height of Low Cloud		Type of C _H (0.9)	e of Ship	Speed of Ship (0	Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	La Lo Lo	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ppp	тт	N _h	CL	h	CM	-67	Ds	Vs	a	pp	8	N _s	E	h _s h _s
SHIP	7		14	73	\$ 00		5 11	0	8 7	80	1 1	09,	13	Alexander of the second	5 .	and in	1 6		1		4	5/	8	1		010
SHIP		7	1 54	736	06	5	16	16	98	01	1	085	2.8	Z-	CH CH	4	10	6	1	4	1	03	8	5	8	18
SHIP	Address.	N. Com	1 m Can	1 4	5 12	4.0	5/4) pä		The same of		2 11	}		1	Small	()	3 Em	7.	Y.	15		8		0) //
SHIP	-7	The Park	137	7/9	18	6	> /2	0	198	ne.		2 101	1	8	2	4	0	0		1	Long	1 /1	8			

	AIR-			SEA WA	AVES			SWELL	WAVES		1	CE AC	CCRETIO	N			SEA I	CE		
Indicator	SEA DIFF. (Coded)	POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d _w d _w	P _w	H _w	1	d,, d,,	P _w	H _w	2	s	E _s E _s	R _s	ICE	C ₂	К	Di	r	е
0	0	2 2	31	pt.	42	1	1	16	2	1	2				ICE					
0		23	7 1			2	1	21	45	2	2				ICE					
0		3	1	7 1			/ 1	13			2				ICE					
0		544	1	00	2	1	1	10	2	1	2				ICE					

	DO NOT TRANSMIT	-
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
go" Ram		
25.3	15.8	30.0

							SHIP	WEAT	THER C	O B S E R V	ATION	SHEET	Г					
USS _	TI	1 WAI	< PM	I	A	T F - 1	14			DATE	(GMT) 16	: 00	T 14	lolo		19		
	ASSAGE FR							\$ \$		TO	,							
	7,007,02									TABLE I								
	I /IE	INDS ESTIMATED	VISI	- WEATHE	DARO.	METER	1	RATURE and tenths)		CLOUDS		SEA WATER		SEA WAVES	S	5	SWELL WAVE	ES
TIM (GM	T) Direction		BIL ITY (Mile	(Sumbale		METER ches)	Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	TEMP. (Degrees and	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height
00	(True)	(Knors)	Comment of the Commen		->	£ 44	ar.			1 *1	prove s	tenths)	1100)	(Seconds)			(Seconds)	(Feet)
01	1/7	0	1		29.		86.5	17	k=	1200	(0	0,0		and the second	And the state of t	120	don't	1.3
02	11/	4.5		1.7.			- 25				,	- F	6. 1	. , #	, ,	,		dame
02	110	1		TEL		79	55	74	· Spanie	150c	CUA!	34	to place		State of the state	155	The state of the s	and a second
03	11/3		- 3	BAN		75	X)	78	6	1804	Cale	76	a Ci	1	2	033		and the second
05	1 " "	Ca w	2	Blow	121	30	70	7 ~	6	1900	110,	\$ 6	090	horas	Transferring.	07,5	4	
06		13.5	3	BYA	129		X 3	7	la la	1900 1000	Cut,	36	090	2	E E	0/3	11	2.955%
07			0	_		13	(L	The same of the sa				06		E	i	013	1	
08	120	2.5	J d		29		32	any any	6	1800	culei	06	090	2	*	080	7	3
	7	-	· 3	BKK		-	82	11	6	1800	cul	86	100	Res .	1	110	4	3
09	1/1			BKN			31.5	11	6		cylei	10	100	A ALLES	1	110	30th	
10	F 1 2-1		8	BKN			81	7.1	6	1800	Cufer	86	16.0	1	1	A Comment	in the second	- I
11	4 4 4		2 P. C.	AKH			1	7 1		1. "			11 000	, e	province of	e e e		11
12	1	(-	5	CHAI			51	77	5	1800	CU	36	Sand Market Market 1 1.	and the same of th	Sandara de la companya del companya del companya de la companya de	Survey .	and the second s	· ora statement of the
13	1 -15		Series Series	12 MM	14		<i>j</i>	F (5.00	F 21	76	American in	part .		1	And the second	1
14	7 1	6		7. 7	, , , , , , , , , , , , , , , , , , ,	,	81	76	4-4	1860	The state of the s	56	1/1.	1 1	1 4	-10	1	Ann.
15	1 1 1	b* .	8	the t		52	To an and a second of the	76	- Const	1410	La	86	fo,	And to	Parket 6-3	096	-	000
16		6		31	/		The same of the sa	76	5	1800	CU	Year	Service of the servic	11/2	H. S.	080		5
17	141	8 6	- 8	Sct			21	76	.5	1800	6/57		for s	3.	A.	085	5	3
18	7	8.5		Sta		. 84	81	76	5	1900	CU	86	September 161 3	1 '5	and it	075	5	4
19	214	and the second	por Ci	Sct	129	87	88	78	4	1900	1 6 6	86	San	1. September 25	The state of the s	030	6	5
20	- grand series of	The state of the s	3. 25 MARS	Dest	A. C.	90		13	4	Separate Con Constitution	the w	76	1	Merchant Control of the Control of t	The state of the s	030	(2)	7
21	Je se men	6	2 6	Set		90	أدنا	and grain	i.f	14/10/10		10	· I part of	The party of the state of the s	AND THE PROPERTY OF THE PARTY O	025	1 may	4
22	20	7	11	36 8	24	May C	*	74	1	1511	<i>(, ·</i>	and the same of th	Control of	part state of	The state of the s		inc.	5
23	150	1	10	· · ·	7	57	4		i /	1 300	a di sa	1.7	" Apple	and the broken.	Samuel and American		5.00	34
										BLE II OBSERVAT	IONS				3.1			
			PO	SITION OF	SHIP			WIND			PRESSURE		CLOUDS		3- PR	HOUR	SIGNIFICAN	T CLOUD
F	IRST GROUP	Day				1	otal		Visi-			AIR			O G TEI	NDENCY		
	OF MESSAGE	Week		otitude Degrees and	Longitude (Degrees	(GMT) A	Month. (True)	(True)	ity Pr (90-99) (0	esent Past 0-99) (0-9)	Barometer T Corrected	(°C) + 0	4 1	of C _H	Speed of Ship (0-9) Characteristic	Amount of Change (Mb and tenths)	nt ts)	Height
		(GMT)		renths)	tenths)		oded) (00-36) (Knots)	(90-99)		(Mb)	Amount Low Cle	Type o (0-9) Height Low CI	1 ype (0.9) Type (0.9)	Speed o	Amount o Change (Mb and te	Amount (Eights) Type	
	1	2	3	4	5	6	7 8	9	10	11 12	13	14 15	16 17	18 19	20 21 22	23 24	25 26	5 27
		Y	Q L _a	L _a L _a	L _o L _o L _o	GG	N dd	ff	VV	ww W	ррр	TT N _h	C _L h	C _M C _H	D _s V _s a	pp 8	N _s C	h _s h _s
	SHIP	1		1.11	700	00	4 18	05	97 1				24	04	137	. 7 8	R	8 12
	SHIP	1	1 11	69	703	06	5 09	05	98 0	22	102	28 5	7 4	00	751	8	6	5 1 2 1 3
	SHIP	3	1 1	79	729		414	. Clo	98 1	82		73	24	0 7.	747	1 4 8		
	SHIP			01	714		7 12	23	920	>3/	de de la companya della companya della companya de la companya della companya del	775	74	() ()	7 4 /	8	49	14/
			/ /	91	J & Eng		11		10		W F 4		See	Party Colors		()/		3 ,/ 3
	AID		SEA WAY	/ES	SW	ELL WAVE	S	ICE ACCR	ETION		SE	EA ICE				DO NOT TRA	NSMIT	
	AIR- SEA POIN	IT TI	C						SS				ion	F	Ory Bulb	Wet Bulk	1	ea Water
	(Coded)	indicator (Direction (Coded)	Coded) (Coded) (Coded)	Indicator	(Coded)	Height (Coded)	Source	Thickness	Indicator	Kind	Bearing	Distance	(1	Degrees id tenths)	(Degrees	5 (Temp. (Degrees nd tenths)
																	ar	
28	29 30		32	33 34		36 37	38 39		41 42	43	44 4		47 48		A ₁	A ₂		A ₃
0	T _s T _s T _d			P _w H _w		d _w P _w		l _s E _s	E _s R _s	ICE	C ₂ K	O Di	r e		Celsius	Celsius		Celsius
0	The same		1/11	11/11/1		22	2			ICE				100	6.2	26.	1 5	O.O.
	54 21	1	09	40	10	18 2	2			ICE					· ·			
1	53 20		(!	01	1 .	(/	2			ICE								
0	- 2	3 1 .	313	1 3	10	19 1	2			ICE								

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REMARKS

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS	12/11	11	1	177	1101	·			DAT	E (GMT)	7 (ET			19		
AT/PASSAGE FRO	M	11	1.11	<i>7.</i>	ė	1-11	111			11511	NIFI	1-	ARH.				
WI	NDS					ТЕМРЕ	RATURE		TABLE		SEA		CEA WA	U.F.C.			
	ESTIMATED	ITY	WEATHER (Symbols)	1		(Degrees	and tenths)		CLOU)S 	WATER TEMP. (Degrees		SEA WAY			SWELL WAVE	
(GMT) Direction (True)	Force (Knots)	(Miles)	(3 y moors)	(1110)		Dry Bulb	Wet Bulb	Amount (Tenths)	Heigh	т Туре	and tenths)	Directi (True			Direction (True)	Period (Seconds)	Height (Feet)
00) / 5 / 6	7	3	BKW	24.		92	74	6		. 47.		·	, salar	- C P P	j	and f	1 any
01 /50	7	c' >	1.11	7.	73	4	14	1.	1	J. Santana		Protections.	· · · · ·	· · · ·	040	4/	5
02 10 3	4.5	1	BKW	198) [91	77	6	180)	1. 16	1 1 s	1	· · · · · · · · · · · · · · · · · · ·	750	4	-
03 // / / /	5	8	ENN	27 7	м ^	8)	1	1.	1777			- Indiana	, mornous and	· some	1	1	
04 1362	19	3	BUN	29.8	12	85	73	8	1800	1 00/0	86	3	i distribution	11	030	4	5
05 /4/2	6.3	X	BKN	29.	15	12	76	6	1600	0 6/	86	14	0 /	1	050	6	3
06) 142	6.5	8	BKK	29.	84	86	77	6	160	O CB	86	140	5 1	* " /	ैडिंग	6	e and
07 134	(6	100	2	and the	88	81	7	7	180				. /	and the same of the	660		4
08	01	8	R	29		79	76	8	180	o cl	186	1		4 / 47	060		4
09 / 3 8	67	8	BKN	1-1		Ty	76		1811	1 64	36.	(do		2	665	eron.	4
10 /38	9	8	BKN	- AND 30°.		and a	73	8	180	100	/			2	065	4	
11 134	9	8	OVC			80	76	10		20 4/51		02		2	065	4	4
12 / 34/3	9	8	OVE	and a	34	No	77	10	,	0 6/3/	\$. \$	02		7_	1365	4	1
13 /34/	3	8	ore			78	75	A Contraction		0 75	1.1	02		7	065	4	4
14 /56	1.8	<u> </u>	OUC	29	19	19	13	10	Mala	The state of the s		14			060	7	7
15 /50	7	j.	OUL	29.	- %	79	15	10	1800		-	14			Mos	4	4
16 /50	1	0	BEN			79	75	10	1800		-	14			063	4	4
17 / 50	1	- 3	BKN		<u>.</u>	YO	16	10	1800					maig.c	065	1	7
18 140	/	3	SKIV			5/	7:-	8	150					and the same of	Sen.	*/	4
1640	10	grane.	KNI				may be made	3	177		-	f 1. p) 11	1. 5 K	, A.	
	7	7 .	LAIN	- : 6	france (A)		And I	***		m C.C.		, , , ,			650	4	
20 3		and the same			· 3	St.	gain a		186	F1 1	man affect	15	Agree and		060	73	dayle.
23 18 51	6	5	BKU		To The state of th	*/		A.	187	2 5 4/3		15			060	Source Contract of the Contrac	4
1138			BKN	y 1.	2 3	\ \tag{\psi}	14	1	ABLE II	0 14/1		1/0/			1 4 4 1	September 1	
		6 4 P 4 2 2 2 2 2 2			1				OBSERV	ATIONS					2 HOUR		
		POSI	TION OF	SHIP			WIND		WEATHER	PRESSURE		CLO	UDS	6 TE	NDENCY	SIGNIFICAN	T CLOUD
FIRST GROUP OF	11 W 1. 1			Longitude (Degrees	TIME C	Amt Directi		Visi- bil- ity	Present Po	Barometer		f CL	of C _M	f Ship Ship (ristic	t of tenths,		M. C. L.A.
MESSAGE	11 1 ' `	-3)	grees and nths)	and tenths)		(True Coded) (00-36		(90-99)	(00-99) (0-	Orrected (Mb)	A mount o	Type of (0-9)	Type of (0.9)	Course o	Amount o Change (Mb and te	Amount (Eights)	Height
1	2	3	4	5	6	7 8	9	10	11 12	13	14 15						
			L _a L _o	 L _o L _o L _o	GG	N dd	ff	VV	ww W		TT N _t		C _M C _F		0		C h _s h _s
SHIP		, a		and a						112			1 1 5	74-) / 1 / 8		
SHIP	21) '-/ is pro	117	06	5 18	07	73	01 2	1 2 30	33 3	9 4	100		7 1 8	1 9	
SHIP	2		25	723	12		2 0 S	95		10	770	7 7	100	711	8	\$ 5	151
SHIP			20	733	18	1 04	0/	48	03 2		36 8	,24		741	10 8		18
	100 1	*	3 /			6/9		1 3	Charles Br		1-1	- 2×4 &			(9 0	
AIR-		SEA WAVI	ES	SWE	ELL WAV	ES	ICE ACC	RETION			SEA ICE				DO NOT TRA	ANSMIT	
SEA POIN	IT	u .		o uo			5	e s s			50	e e	ation	Dry Bulb	Wet Bu	b	Sea Water Temp.
(°C cded)	Indicator	(Coded)	(Coded) (Coded)	Indicator	(Coded)	(Coded) Height (Coded)	Source	Thickness	Indicat	or pu. X	Effect Bearing	Distance	Orientation	(Degrees and tenths)	(Degree		(Degrees and tenths)
			33 34		36 37		9 40	41 42	43	44	45 46	47	48	A ₁	A ₂		A ₃
								41 42 s E _s R _s	ICE	C ₂	K D;	7	e e	Celsius	Cels iu	s	Celsius
S 5 d			P. H.					s s s	ICE								
3 1 1	1	201 6	7 0		742				ICE					27.8	25.	-	0.0
0 58 23	3 1	7	2 1	1	5 2	7 7			ICE					7110	The said of	Second Second	har y
0 52 2		DLA	7 1	1 0	5 2				ICE								
John de)		7 3	6.2													
															7		

EXAMINED _

SHIP WEATHER OBSERVATION SHEET

TABLE I

USS DATE (GMT) TO TO LAND

SEA TEMPERATURE WINDS WATER SEA WAVES SWELL WAVES CLOUDS VISI-☐ ✓ IF ESTIMATED (Degrees and tenths) TEMP. BIL-WEATHER BAROMETER TIME (Degrees ITY (Inches) (Symbols) (GMT) Period Height Direction Period Dry Direction Height Amount Wet and Direction Force (Miles) Height Type (Seconds) (Feet) (True) (Seconds) (True) (Feet) Bulb Bulb (Tenths) tenths) (Knots) (True) 13 el 00 5/2 Service of the servic 01 150c St. -010 02 per W 03 1000 04 10 05 06 3 716 1900 07 43 5 75 27.91 己 76 30 80 me 1 -76 0.75 09 in the same of Carl. 1 76 10 ----11 150 5-1 16 11 - 4 in the Euro E 12 win 13 is 5 T E.F. 76 14 76 16 17 Marie Control 200 Th 43 18 10 19 -20 83 22 125 78 23

TABLE II SYNOPTIC OBSERVATIONS

			POSITION OF	F SHIP			WII	ND		WEAT	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0)	3-H PRE TEN	HOUR SSURE DENCY	SIC	GNIFIC	CANT C	CLOUD
FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	Oc- tont (0-3) (5-8)	Latitude (Degrees ond tenths)	Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	(True)	Speed (True) (Knots)	Visi- bil- ity (90-99)	Present (00-99)	Post (0-9)	Barometer Corrected (Mb)	AIR TEMP. (°C)	1000	Type of C _L (0.9)	Height of Low Cloud	Type of C_M (0-9)	Type of C _H (0-9)	e of Ship	Speed of Ship (Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	L _o L _o L _a	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	Сн	Ds	V _s	α	рр	8	N _s	С	h _s h _s
SHIP	27 miles	- Jackinger	247	J. A. S.	00		South English	The state of	94		and the same	112	27	Fred	Show	4	13 mer 4	Parameter)	8	17	7	12	8	Y	direction of the second	18
SHIP	Andrew P	d annual or	1 32.	737	06	8	in the same	06	Cy &	01	3	119	26	*	4.	Winds.		0	3	2	de la	00	8	3	6	18
SHIP	7	1	254	741	12		11	08	1 70	11	0	172	2/1	3	1	4	()	61	7	and i	7	17	8	The state of	8	18
SHIP	3	1	260	740	18	3	13	2	98	01	1	115	26	3	Law	4	Ö	0	1	4	- Statement	10	8	2	1	13

	ALD			SEA WA	AVES			SWELL	WAVES		I	CE AC	CRETIO	N			SEA I	CE		
Indicator	AIR- SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	T _s T _s	T _d T _d	1	d, d,	P _w	Н"	1	d _w d _w	P _w	Н"	2	Is	E _s E _s	Rs	ICE	C ₂	К	Di	r	е
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0	5 8	23	1	to an and	2.	- William	1_	132	-2.00	OF THE STREET	2			1	ICE					
0	5.1	14	1	00	"La		1	34	2	2	2				ICE			,		
0	43	physical and	1	13	2	1	1	20	sifteen .	diam.	2				ICE					
				V																

I	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A ₁	A ₂	A ₃
Celsius	Celsius	Celsius
273	25.0	28.3
26.1	int of	army for the same
1	et d	11 / ·

REMARKS

EXAMINED

REMARKS ___

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

DATE (GMT) 1900TOBER USS TAWATONI ATF114 AT/PASSAGE FROM TO TABLE I SEA TEMPERATURE WINDS SEA WAVES CLOUDS WATER VISI-SWELL WAVES (Degrees and tenths) ☐ / IF ESTIMATED WEATHER TEMP. BIL-BAROMETER TIME (Degrees ITY (Inches) (Symbols) (GMT) Direction Period Height Period Dry Wet Direction Direction Amount Height (Miles) Force and Height Type Bulb Bulb (Tenths) (True) (Seconds) (Feet) (True) (Seconds) (Feet) (Knots) (True) tenths) 250 00 250 01 70 76.8 02 03 150 76 04 05 2 86 06 88 1300 100 07 1 08 i. 1800 563 6.64 1 200 09 Enter & 2995 1 4.6 以 173 10 A STATE OF THE PARTY OF THE PAR 11 1 de 12 13 76 14 64 15 700 24.91 165 16 T 17 The state of 18 19 In) 20 4 21 5 22 congression of 23 TABLE II SYNOPTIC OBSERVATIONS 3-HOUR PRESSURE TENDENCY SIGNIFICANT CLOUD CLOUDS .. POSITION OF SHIP WIND WEATHER PRESSURE Course of Ship (0-9) Speed of Ship (0-9) Day Total Visi-Characteristic (0-8) Amount of Change (Mb and tenths) FIRST GROUP of bil-Type of C_M (0-9) Type of C_H (0.9) Cloud TIME Amount of Low Cloud Type of C_L (0-9) OF 0c-Longitude Height of Low Cloud Lotitude TEMP. Borometer Direction Speed Week (GMT) Present Post Amount (Eights) Amt. ity tont (Degrees (Degrees (°C) Indicator MESSAGE Height (True) (True) Corrected (1-7)(00-99)(0-9)(0-3)and ond (90-99)(Coded) (00-36)(Knots) (Mb) (GMT) (5-8) tenths) tenths) 17 18 20 21 22 11 12 13 15 16 19 23 24 25 26 27 2 3 9 10 4 5 6 Ds C_L C_M \vee_{s} Ns C $h_s h_s$ N_h VV TT C_H 8 ff Q GG dd WWа pр ppp 6 SHIP 00 SHIP 00 12 SHIP SHIP 18 ~ ~ . DO NOT TRANSMIT SEA ICE SEA WAVES SWELL WAVES ICE ACCRETION AIR-DEW SEA Orientation Sea Water POINT Thickness Wet Bulb DIFF. Dry Bulb Direction (Coded) Direction (Coded) Distance Indicator Indicator Temp. Indicator Period (Coded) Height (Coded) Height (Coded) Period (Coded) Indicator (Degrees (Degrees (Coded) Indicator Kind (Degrees Rate and tenths) and tenths) and tenths) A_3 28 37 38 48 29 30 31 32 33 34 35 36 39 40 41 42 43 44 45 46 47 A_2 H_{w} Celsius E_s E_s Celsius Celsius ICE C_2 ICE ICE 1CE ICE

EXAMINED

REMARKS

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS		111	IKC	NI	17	FI	14		DATE ((GMT)	26	CCT	CRE	12	19 600	1	
AT/PAS	SSAGE FRO	M _ 1/2	FIR	L 1	HOKROK	7 / 3	11/1/		TO								
		NDS ESTIMATED	VISI-	WEATHED	DADOMETED	TEMPER			CLOUDS		SEA WATER TEMP.		SEA WAVES	5	S	SWELL WAVE	ES
TIME (GMT)	Direction (True)	Force (Knots)	BIL- ITY (Miles)	(Symbols)		Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
- 00	150	12	8	SCT	29.97	83	77.	4	1000	The	86	110	4	1/2	270	8	E.
por	1	16	•	100	2175	pare gra		1	1 1	CII	Sur.	1.5	1/	At John 11	1 60	enter trans	
92	160	10	8	SCT	29.94	85	77	4	1800	Clle	86	150	· Of		200	7	4
98	170	11	É	36/	29.15	3 W	17	(1 200	TICK	\$6	100	4	1	290	3 8	7
05	15.19	144		567	29 95	X C	75		Ber	CUM	280	110	3	1	530	7	6
96)	160	12	B	SCT	29.95	785	755		1160	CHAC	36	MO	4	11/5	20	6	5
27	140	15	19	SCT	29.99	7	7 4	4	1500	17 €	95	115	6-/	1	300	4	Proses
68	160	12	9	SCT	29.98	78	75	4,	1570	170	85	115	4	1	300	6	Year.
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11	160	143		5-1	20.00	18,5	15	7	1500	04	84	113	W C	\$	and the second		
12	160		X	SCT SCT	30.00	79	773	L.	1910		74	3 .7)	Mr.	The state of the s		\$	-5 -0 -0 -0 0/h -0 10 0/h -0
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15	155		A see	SIT	29.95	72	E and	, second	1396		Afficiancy),	S. page 5.2	and the same of th	12/	11/13	S. C. S. C. S.	11/11
16	130	120	16	SCT		in in	The said	hor.	1800	CU	and the second s	11/21	11/11	1	1	Suprador 1 c	12
17	100	10	10		29,95	7/	J last	1	1800	(0)	85	11 13	1	1	115	State of the state	711
19	247	13	10	DUT DUT	29.99	81.5	16	7	1300	CAL	is -500	112	- Jan	1	150	3	4
20	2011	13.5	10	507	2999	10	76	En .	1///0	Cu	13	150	Luca		160	and a second	6
21	181	13.3	10	- William	30.00	And the second s	The same of the sa	2	1800	Cu	83	150	- Com	B. P. S.	160	A. Tari	Paris .
22	130	1.0	1/6	7	31.50	20.5	75,5		15.00	-		1	# PAT	1	1753	She she	Com
23	166		18	501	2000	735	755		ABLE II	£ 6 a	7.2	14.1		,	1 18	Shiput	
								SYNOPTIC	OBSERVAT			CLOUDS		3	-HOUR RESSURE	SIGNIFICAN	T CLOUD
FIR	ST GROUP	Day	POS	ITION OF		Total	WIND	Visi-	WEATHER	PRESSURE	AIR	→		9 6 TE	NDENCY		
	OF MESSAGE	Week	tant (D (0-3)	egrees and enths)	(Degrees (GMT)	Amt. Directi (True (00-36) (True)	ity (90-99)	resent Past (0-9)	Barometer Corrected (Mb)	Amount of Low Cloud	Type of C _L (0.9) Height of Low Cloud	Type of CM (0-9) Type of CH (0-9)	Course of Ship (Speed of Ship (Characteristic	Amount of Change (Mb and tenths)	Amount (Eights)	Height
	1	2	3	4	5 6	7 8	9	10	11 12	13	14 15	16 17	18 19	20 21 22	23 2	24 25 2	26 27
		Y	Q L _a	L _a L _a	L _o L _o GG	N dd	ff	VV	ww W	ррр	TT N _h	C _L h	C _M C _H	D _s V _s a	pp 8	5	C h _s h _s
	SHIP	5	12	10	740 00	3 15	12	78	230	149	782	24	04	007	07 8	25	13
	SHIP	5	12	60	740 06	116		98 0	01 1	142	29 1	1 41		100	100	3 1 1	//
	SHIP SHIP		20 30 3		74/6 12	7 15		18 0	201		267	7 4		2003	10	3 7 7	15
		-5	12	60	740	42		771	12.0		() jens	E Mirry 4				feet.	/ Y
			SEA WAY	/FS	SWELL WAY	/ES	ICE ACCF	RETION		S	SEA ICE				DO NOT TR	ANSMIT	
	AIR- DE POI											0 .0		Dry Bulb	Wet Bu	ulb	Sea Water
	OIFF. (°C		Direction (Coded)	(Coded) Height (Coded)	Indicator Direction (Coded)	(Coded) Height (Coded)	Source	Thickness	Indicator	Kind	Effect Bearing	Distance	C	(Degrees and tenths)	(Degre	es	Temp. (Degrees and tenths)
28	29 30	31	32	33 34	35 36 3	7 38 3	9 40	41 42	43	44	45 46	47 48		A ₁	A ₂		A ₃
0 T	s Ts Td	T _d 1	d,, d,,	P _w H _w	1 d, d, P	. Н _w	2 I _s E	s Es Rs	ICE	C ₂	K D _i	r, e		Celsius	Celsi	us	Celsius
	2 1	4 1	11	21	1 29 6	13	2		ICE					1- A	311	, ,	70
0	5824	1	11	21	1 31 3	- Lond	2	٤	ICE				1	2,0	741		30,0
0	92	2 1	1	5 0	1 29 3	Mary Comment	2		ICE				nat of		23.7	1	7
	3 fortune		3.80	/				,							r .		
REMAR	DKS				- Pears 1	160 600		FXA	MINED							USN,	NAVIGATOR

SHIP WEATHER OBSERVATION SHEET

USS TRUMENT OF IT DATE (GMT) TO LAND TABLE I

	TABLE I																
TIME				WEATHER	BAROMETER	TEMPER (Degrees a			CLOUDS		SEA WATER TEMP.		SEA WAVES		S	S	
(GMT)	Direction (True)	Force (Knots)	(Miles)	(Symbols)		Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Туре	(Degrees and tenths)	Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
60	150	-wares	3	311	2173	50	76	3	170	CA	to ser	140	erens epined	, mili	100	3	7
01	1 412	7	- (:	- 7-	£9 G.	.71	77	ž	1 200	earn S ^a g	or 3	140	200 mg	vana K	100	19	">
02	153	11.5	8	RKW	29.95	44	of the same	6	1800	04/51	2. 2	120	2	52	115	5	7
03	11.0	A.	godinali	1 AAA	4 1	777	11-	4	1787	7	52	1 31.7	Marine P		128		rin
04	157	12:		FAX	25, 57 5		775	1	1866	Cyt,	The state of the	125	3		120	See and the second	1
05	160	12	8	GAL	2996	82	77	El mont	1800	CH		173	3	E.	120	5	7
06	170	12	4	Blas	2998	80	75	5	1800	1-60	82	165	1	/	145	4	4
07	200	11	2	BAL	30100	79.3	76	and a second	1800	CAA	82	160	7	/	190	4	ef
08	180	10	8	Bha	30.00	79	76		180	ac en	12	160	- Lamen	1	190	Proof.	4
09	120	8	8	OKI	3001	79	76	and the same of th	18170	W	82	165	2	11/11	190	4	4
10	170	15	5	BKN	29,99	79	70	5	1200	CW	82	life	11/11	/	11/11	11/11	11/10
11	170	1 3	4	BKE	29,59	79	14	5	1800	2)	82	4/11	1/11	1/11	11/11	7/11	7"
(12)	170	10	8	BKN	29.98	79	76	3	1800	60	(113,00)	A D D D	i singual property	and a deli	St. Contraction with 1	And and and a second	The state of the s
13	190	13			129.94	79	77	5	1800		82	1/1	1/11	1/1	11/10	1/11	1
14	190	and the same of th	1/4	R	29.94	78.5	75	1.0	2000		82	160	and the same of th	1	270	(5)	6
15	190	5	8	- Constitution of the Cons	29,93	785	75	-500	of white	2ª Sura	82	168	3	1	290	0	The state of the s
16	235	4	The second second	BK	29.93	78.5	years and	and	210		82	235	De la	12	240	1	3
17	and the same	10	Service Services	SCT	29,93	78,5	75	4/	1 7000	104	82	Car Gar	S. Party Pro-	Team.	310	7	The state of the s
(18)	7.50	16	3		29,95	785	Land A. J.	The state of the s	1300	6.4	82	268	1	3	2/6	in the second	A. Company
19	278	10	8	BICH	24 93	82	Trans Cons	to a	1300	1 1 1	82	in la st	e dia	Z	310	Trag !	200 M
20	3503	10	8	BKN	29,98	83	79	17	13/2d	CU	82	310	2	2	330	6	4
21	356		8	BK	36.5	6	77	3	1869	1 16 1	82	124	2	52	340	100.00	M
22	350	G)	8	BKI	29.76	37	76	7	18/00	The state of	82	340	3	1	3-15	S. S.	info
23	1 3 4, 5	Sec. 15	V	BKA	29.16	8 %	78	and day.	1810	14/31	82	3 7/	ex sep "	230) in (,	المد.	

			POSITION OF SHIP				WII	ND ,		WEATI	HER	PRESSURE			C	LOUD	S		(6-0)	(6-0)	3-H PRE TENI	IOUR SSURE DENCY	SIC	SNIFIC	ANT C	CLOUD
FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	Oc- tont (0-3) (5-8)	Lotitude (Degrees ond tenths)	Longitude (Degrees ond tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	(True)	·Speed (True) ·(Knots)	Visi- bil- ity (90-99)	Present (00-99)	Post (0-9)	Borometer Corrected (Mb)	AIR TEMP. (°C)		Type of C _L (0-9)		Type of C _M (0-9)	Type of C _H (0-9)	Course of Ship (Speed of Ship (C		Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Туре	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	La La La	L _o L _o L _o	GG	N	dd	ff	VV	ww	W	ррр	TT	N _h	CL	h	C _M	Сн	Ds	V _s	а	рр	8	N _s	С	h _s h _s
SHIP	1	*	258	730	00	3	: 15	07	19	63	(5)	1 200	27	2	2	lef	0	Sand Sand	2	5	6	07	8	2	8	12
ŚHIP	6	j	150	110	06	4	17	1 2	94	07	- org	152	Electron of	5	The state of	di di	0	0	0	D	Salar State	10	8	-5		18
SHIP		e de la constante de la consta	/	Prof.	12	Any de	1 34	1 111	78		13.	153	26	lingh	my mi	Logi	1	J. 1	, ,	÷ ,	2300	god god and	8	Conf	ALL STATES	And the second
SHIP	6	NA ZBOS IN	258	718	18	- 35 San	25	100	98	13	1	to be the second	Z.S.	aring a	8	1980-21 2 2016:12 2030		0	B	0	1764 State	07	8	WAY TO A STATE OF THE STATE OF	3	Ton of
	1																									

				SEA WA	VES		SWELL WAVES				ICE ACCRETION				SEA ICE						
Indicator	SEA DIFF. (Coded)	DEW POINT (°C)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
0	T _s T _s	T _d T _d	1	d,, d,,	P _w	H _w	1	d _w d _w	P _w	Н"	2	5	E _s E _s	R _s	ICE	C ₂	К	Di	r	e	
0	51	23	1	14	J.	-7	1	10	4	5	2				ICE						
0	51	23	1	17	2	1	1	24	2.	Louis	2				ICE						
0	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	24	1	4	15.	and the second	1	(A. C.	J'and.	2				ICE						
0	54		1	26	7 1	A MARIE O	1	31	3	3	2				ICE						
	,																				

	DO NOT TRANSMIT	
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
Aı	A ₂	A ₃
Celsius	Celsius	Celsius
26,7	24,4	123
25,8	239	The same of the sa

ADMINISTRATION OF THE PROPERTY								WEAT	HER C	BSERV				_			-	
Total Street Tota	USS	TH	WI					4		DATE	(GMT)		OC	/		19	6	28
The control	AT/ PAS	SAGE FROM		1.	7 1	591	1 4	5.										
Second S				VISI										SEA WAVES		S	SWELL WAVE	S
## 10 1 1 1 1 1 1 1 1 1				BIL- ITY	1			1	Amount			TEMP.						
350 7 1050 24 23 44 75 3 100 5 10 25 3 24 5 3 3 3 4 5 3 3 100 5 10 25 25 3 24 5 3 3 3 4 5 3 3 100 5 10 25 25 3 25 4 5 3 3 10 5 3 3 10 5 3 10 5 10		1		(Miles)						Height	Туре							(Feet)
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22 S. D. 12 10 17 17 18 17 18 17 18 18		350	9	10	SCT	29.93	72/	24	3	18 OC	57	8 2	3110	3	1	340	5	3
N 25 19 10 25 29 35 7 5 100 100 2 35 3 100 5 3 3 3 3 3 3 3 3 3		310	10	10	501	2475	1	18	Aug.	1101	37	3	Mills street	3	0.00	3,40	5	
65 37/6 13 11 1 29.77 17 1 3 2000 CV 2 31 3 1 200 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		350	1	10	1	2194		110	5	1800		[874]	373		-	المراسل المراسل المراسل	- cor	and the same
		20	13	10	S. T.	9661		7/	6	1000	Coll	8 9	218	- 3		2011	3	2
State		3 7	3 4	10		1 29 65 7	0	Jos age	2	2000		(2)	777	· ·	1)
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10 10 10 10 10 10 10 10	09	t)	,		5 7		f					,	<u>.</u>				12	canti
10 10 10 10 10 10 10 10	10	÷			Bille	1 1.7 P. 1.7	, e	74	/ ₁ -	1.78 7	C. f./	j -6	1000	econo 200	*	in the	i a	4 15
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14	12	• ;			OHN	27.19	27	7:3		· ·					0 ° °		1	
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